FINANCE COMMERCE ENGINEERING

THE

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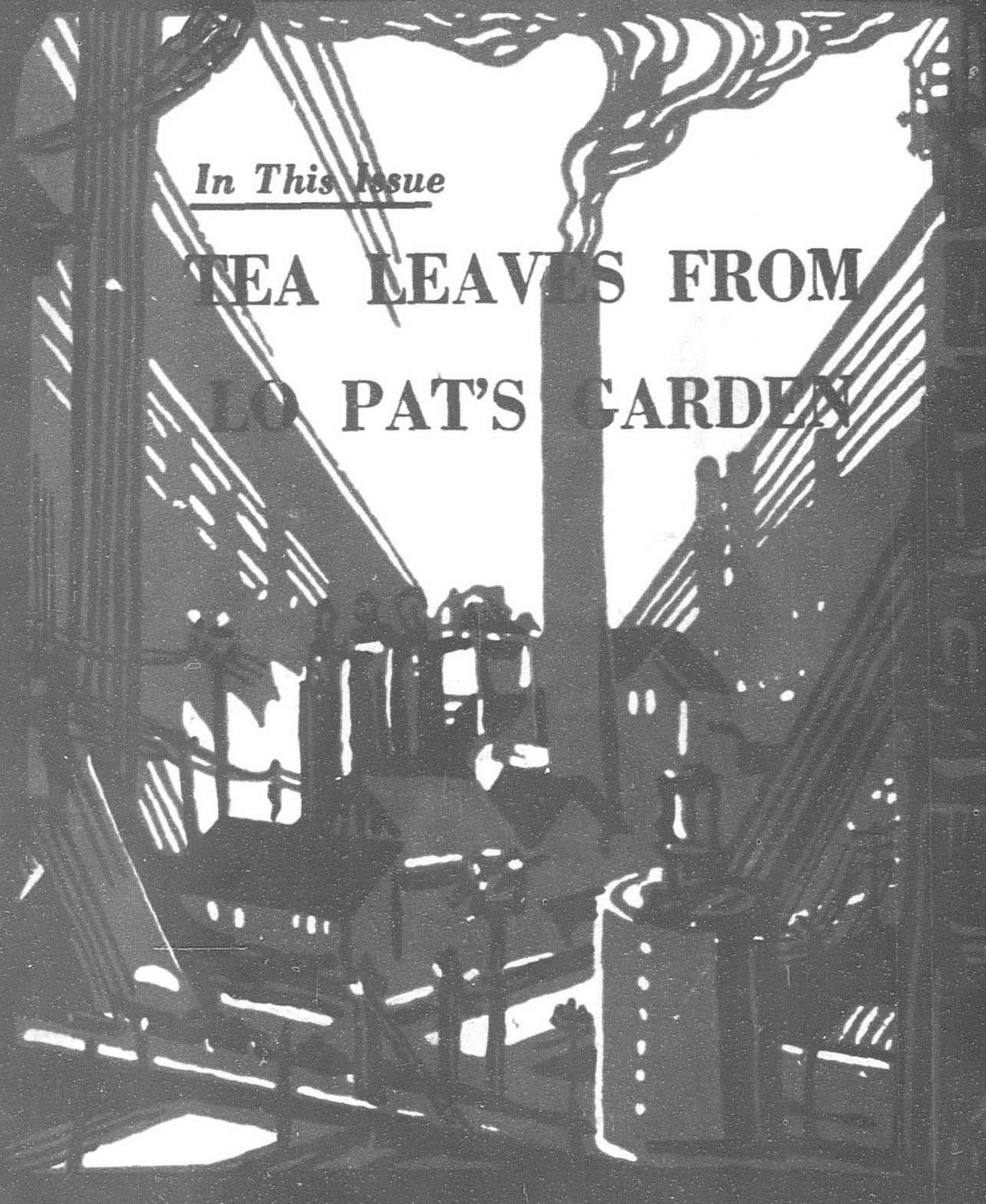

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CHINA AND HER FOREIGN ADVISERS

WHAT A HUNDRED YEARS HAVE WROUGHT

Vol. XXXVII JULY, 1941 No. 7

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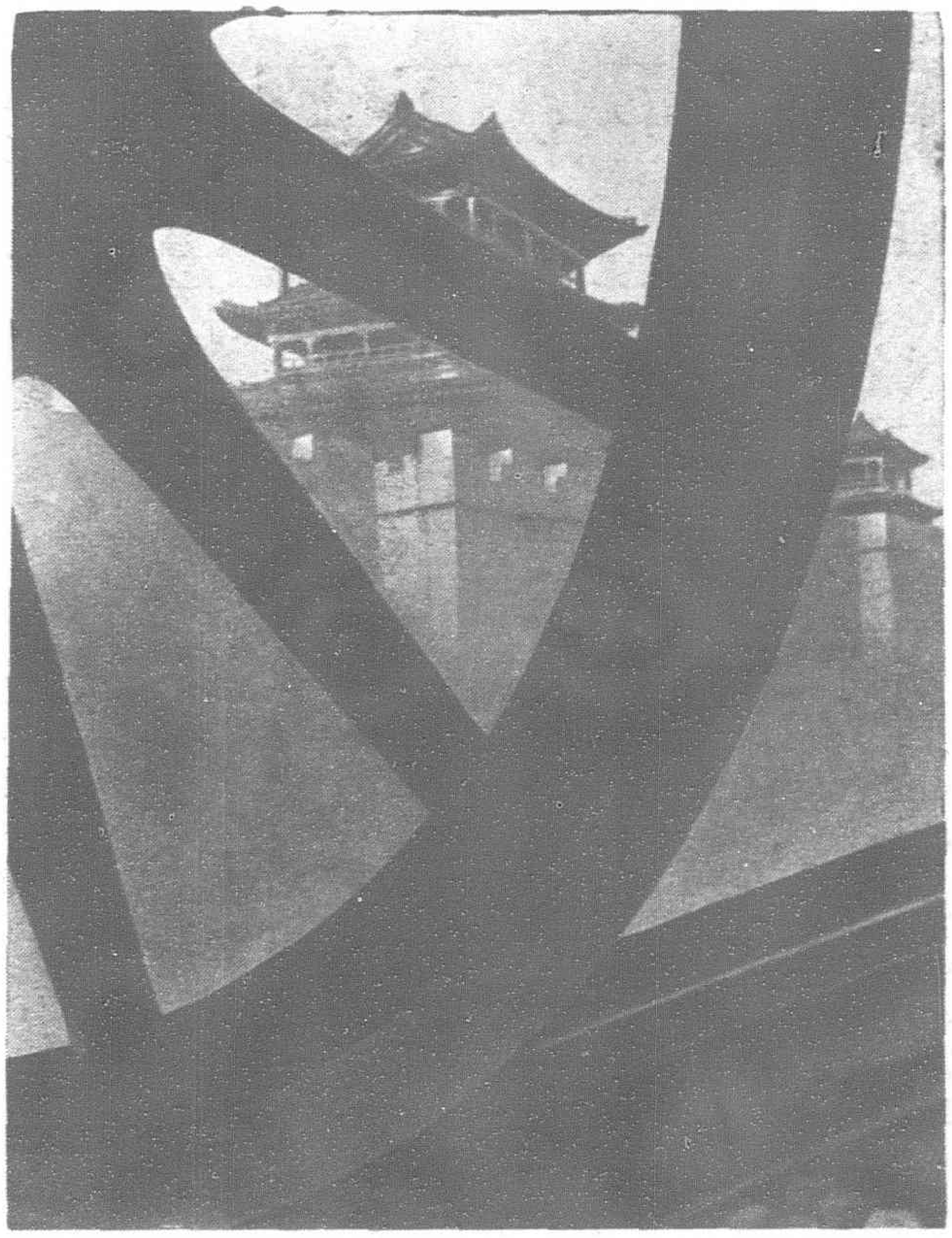

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The Far Eastern Review

ENGINEERING FINANCE COMMERCE

VOL. XXXVII SHANGHAI, JULY, 1941 No. 7

FAR EASTERN CROSS-CURRENTS

Following the outbreak of war between Germany and Soviet Russia undoubtedly the major political development of the past month in the Far East was the abrupt resignation of the Japanese Cabinet on July 16 and the swift formation, on July 18, of a new Government under Prince Fumimaro Konoye as Premier—the third Government to be headed by Prince Konoye in recent times. Reasons for the change, as publicly announced, was the "need for immediately strengthening Government policies to cope with the domestic and international situation." The complete list of members of the new Cabinet, which has received Imperial sanction follows :—

Premier and concurrently Justice Minister, Prince Fumimaro Konoye.

Foreign Minister and concurrently Overseas Minister, Admiral Teijiro Toyoda, former Minister of Commerce and Industry.

Home Minister, Mr. Harumichi Tanabe, former Communications Minister in the Hiranuma Cabinet.

Finance Minister, Mr. Masatsune Ogura, former Minister-without-Portfolio.

War Minister, Lieut.-Gen. Hideki Tojo.

Navy Minister, Admiral Koshiro Oikawa.

Education Minister, Dr. Kunihiko Hashida.

Agriculture and Forestry Minister, Mr. Hiroyasu Ino.

Commerce and Industry Minister, Vice-Admiral Masazo Sakonji, President of the North Saghalien Oil Company.

Communications Minister and concurrently Railway Minister, Mr. Shozo Murata.

Welfare Minister, Lieut.-Gen. Chikahiko Koizumi, Director of the Fourth Section of the Central Co-operative Council of the National Service Association.

Ministers-without-Portfolio, Lieut.-Gen. Heisuke Yanagawa ; former Justice Minister ; Lieut.-Gen. Teiichi Suzumi, concurrently Governor of the Cabinet Planning Board ; and possibly Baron Kiichiro Hiranuma, former Home Minister.

Chief Secretary, Mr. Kenji Tomita.

Director of the Legislative Bureau, Mr. Naokai Murase.

President of the Information Board, Dr. Nobufumi Ito.

It is to be noted that singularly few changes from the preceding membership in the Cabinet have been made. Five former ministers including Mr. Yosuke Matsuoka, Foreign Minister, have been eliminated, and in their stead are three new figures in the membership of the Cabinet which includes fourteen Ministers. Of the ten Ministers held over from the preceding Administration seven will continue to occupy the positions they have held hitherto including the key portfolios of the War and the Navy. Four others have been transferred to preside over different administrative departments. Seven of the fourteen Ministers are of military or naval extraction covering the posts of Foreign Affairs, Commerce and Industry, and Welfare, including three Admirals and four Army Generals.

Major Changes Not Anticipated

Until the third Konoye Cabinet in Tokyo swings into action no one can say which way the wind is to blow for Tokyo. But there are certain unmistakable signs that the previous Cabinet's wait-and-see policy will be continued for some time, perhaps until the rest of the world situation becomes a bit clearer.

Most of the former Cabinet is in office again, and all the key men except Foreign Minister Yosuke Matsuoka are back in their seats. The emphasis in the reshuffle was obviously over the Foreign Ministership.

To a great many outsiders Mr. Matsuoka's outspoken conduct and his vigorous, blustering ways seemed incompatible with the official policy of watchful waiting. In a game of countermoves it is not wise to tip one's hand, and obviously Mr. Matsuoka was showing too much dynamic initiative for a static policy.

Under other circumstances the effervescent, virile type of diplomacy might be ideal, but events have shown that it did not fit these times. The Matsuoka star is once more on the descent, but the man being what he is, will bear watching. The sort of individual who stormed out of the League of Nations, who blitzkrieged his way through a year as head of the Foreign Office, who deigned to go and see for himself to Moscow, Berlin and Rome, is not one to leave the public scene without a fight.

The World now has its eyes on Admiral Teijiro Toyoda, the new Foreign Minister. A man of many talents, he has the urbanity associated with Japanese Naval men who have spent many years abroad. Those who know him personally speak well of his calm outlook, his geniality, and his friendliness.

Without a doubt Admiral Toyoda leans more toward the democracies than the Axis. Many of his years were spent in London. Level-headed and stable of temperament, his choice should be welcomed in both the United States and Britain for the democratic capitals are anxious that a calming influence temper the actions of Japan.

Until recently Admiral Toyoda was restricted to Naval affairs but he demonstrated his capabilities as Minister of Commerce and Industry in the previous Cabinet. Only 56 years of age, Admiral Toyoda may well be on his way to greater things.

"Four Point" Program

The Japanese government has adopted a four-point military, political and economic program designed to strengthen the Japanese-sponsored government in Nanking and bring about the "final collapse" of the Chungking Government well-informed quarters in Tokyo report.

Outstanding feature of the new program is a plan to increase Nanking's native armed forces from their present level of 150,000 to 500,000 men.

If this force of a half million men, to be trained by Japanese officers in China, can be used to launch a full dress civil war between Nanking and Chungking, a large number of Japanese troops presumably would be released from the China front for possible action elsewhere, military observers said.

The four-point program adopted by the Japanese government envisages these developments :

(1) Increase in the Nanking army from 150,000 to 500,000 and enlargement of police and peace preservation forces.

(2) Creation of a "model peace zone" in the area under the jurisdiction of the Japanese-sponsored Nanking regime.

(3) Through loans to the Nanking government, aid in industrial and agricultural rehabilitation in the hope that improved economic conditions will attract high officials from Chungking and result in the return of millions of refugees now living in unoccupied China.

(4) Seek closer collaboration between Japan's Axis partners—Germany and Italy—and the Nanking government. The first objective, to obtain immediate recognition of the Nanking regime by Berlin and Rome, has now been realized.

JAPAN AND THE GERMAN-RUSSIAN WAR

Studies National Problems

The Japanese government on July 2 reached a decision "on important national problems to meet the current situation," during an Imperial Conference held at the Palace, according to official announcements.

The decision was on the Government's policy to be followed in relation to the international situation as a result of the Russo-German war.

Mr. Yosuke Matsuoka, Foreign Minister, in a formal statement declared, "I feel that a super-emergency situation is developing before our eyes in East Asia.

Mr. Matsuoka did not reveal the decision which was reached at the Imperial conference, but indicated that Japan's course temporarily would be one of watchful waiting.

He said that the Government would not meet the situation resulting from the Russo-German war on the basis of the "simple idea that a war was started between those two countries," but must cautiously watch with firm determination not only the circumstances directly connecting the Russo-German war but the world as a whole and relations between world Powers and their movements.

The statement by Mr. Matsuoka was believed to indicate that highly important decisions were reached because the conference was held in the presence of the Emperor—the eighth such conference in the history of Japan. The seventh was held on September 19, 1940, prior to conclusion of the Tripartite Pact.

Major-General Eugen Ott, German Ambassador, and Sig. Mario Indelli, Italian Ambassador, called on the Foreign Minister at 2 p.m. while M. Constantin Smetanin, Soviet Ambassador, visited Mr. Matsuoka at 3 p.m., presumably to seek clarification of the brief Government announcement.

To Respect Two Pacts

Japan intends to respect both the Tripartite Pact and the Soviet-Japanese neutrality pact in order to concentrate its attention on the "New Order in East Asia" and to prevent spread of the European war to the Pacific, the bimonthly *Revue Diplomatique* declared. The magazine is supported by the Japanese Foreign Office.

The *Revue Diplomatique* declared that Japan must complete construction of the Asiatic "new order" before stepping into any other world scene "no matter how the war develops or how the international situation develops."

It stated that third powers should avoid meddling in China, but added that at the same time "Japan should stick entirely to East Asia and settle the China Affair."

The magazine ridiculed the failure of the vernacular press to inform the Japanese people of the Soviet-German tension existing before outbreak of the hostilities.

"Of course Chancellor Adolf Hitler will follow the 'Mein Kampf' doctrine," it added.

Observers point out that there is nothing contradictory in Japan's intention to respect both of her treaties with Soviet Russia and Germany. Japan under one treaty is merely obliged not to attack Russia, while Germany prefers that Japan not attack Soviet Russia but remain free of any involvements. This would enable Japan to fulfil her major objective in the Tripartite Alliance—to keep the United States from intervening in the European war.

Japan Is Neutral

The *Japan Times and Advertiser*, generally regarded as a semi-official organ of the Foreign Office, said that "Japan, under terms of the treaties with Germany and Russia, maintains friendship with both; this implies neutrality while the nation's future policy is being determined."

Meanwhile, usually reliable German quarters said that Germany does not intend to make any requests for Japanese action under the Tripartite Pact in connection with the Russo-German war.

Reliable sources also understood that the Soviets were preparing a note for delivery to Mr. Yosuke Matsuoka, Foreign Minister, requesting that Japan maintain strict neutrality under terms of the Russo-Japanese non-aggression pact.

The *Japan Times and Advertiser* predicted a German victory over Russia. Such a victory would render Germany secure against outside attack the newspaper said, adding that "above all things, safety and the interests of Japan are the dominant and primary principles," in determining future Japanese policy.

"Before the Government determines its policy," the newspaper added, "it behooves all the people to maintain an attitude of reserve and to guard their speech and action.

"Nothing likely to compromise the nation must be undertaken," said the newspaper. Confidence in the Cabinet must be the first reaction. The political and military situation is extremely delicate."

"Wait and See" Policy Likely

While rumors are rife over capital as to the decision on policy taken at the Imperial Conference on July 2, seasoned Japanese observers assert that the Conference could only have decided to await further international developments, without engaging Japan's forces in any military or naval action before sufficient time has passed for a good idea to be formed of the outcome of the German-Soviet war.

For the man in the street, however, the Conference must have either decided to move northward with Vladivostok as the main objective, or resume the southward drive interrupted following the establishment of Japanese bases in Tonkin.

One thing is certain, however, and that is that secrecy has been well-observed.

Japanese observers do not consider it unlikely that imperial sanction was granted not to a single decision, but to several interchangeable action plans, between which the Supreme Command will choose at the last minute according to prevailing circumstances.

Never has Japan during the past few years been tempted by so many opportunities, nor have so many conflicting currents of opinion been formed at one time.

The main question for her at present is whether to act or to wait. There is no doubt that should Japanese public opinion be asked to choose between the two, it would favor a temporary respite.

On the other hand, there is no responsible Japanese who is not aware that in face of the universal upheaval his country cannot remain motionless and that whether she wants to or not, Japan is irresistibly drawn into the whirlpool of action.

This again raises the question of whether she will move northward or southward. There are arguments in favor of both, for never has Japan had such a golden opportunity to thwart "the dagger pointed at her heart" that Vladivostok is supposed to be, nor has she ever had a better chance to resume her southward drive, now that the German-Soviet war has removed the threat which has hung over Manchoukuo's borders for the past few years.

However, should instinct weigh over logic the northward drive would prove the choice. Ever since Sunday, June 22, the day of the outbreak of the Soviet-German war, all Japanese eyes have been turned to the north. Public opinion is reminded of Japan's victory over Russia in 1905. At the same time, there springs to mind the ever-present idea that the task of the victors of 1905 has never been completed.

Japan's leaders believe that Soviet Russia may prove a hard nut to crack for the Reich. Even should the Red Army suddenly collapse, there is always the possibility of continued resistance in the vast expanse of Siberia. Another fact likely to act as a damper to any hot-headed decisions is that there are still 40 Soviet divisions massed along the borders of Manchoukuo, none of them having been transferred to the west.

To attack Russia despite all these factors would necessitate a huge number of reserve troops and, according to all accounts, Japan would not be able to muster a sufficient number of reserves without withdrawing part of her armies now fighting in China.

Last but not least is Japan's fear of a move by the United States. Her leaders are convinced that Washington is deeply interested in the fate of Vladivostok, the port through which American aid to the Russians would be shipped, as long as Moscow can resist the Germans, but that this interest would be lost altogether the day Soviet Russia collapses.

Thus, the Japanese Government will probably do nothing against Russia until there are signs of her collapse. Neither is Japan likely to start a southward drive in the meantime for fear that a sudden development in the Soviet-German war might catch her unawares just at a time when it would be too late for her to turn back.

Japan Faces Problems

Japan, writes a British observer, begins to show signs of alarm at Herr Hitler's gargantuan ambitions. Japanese papers such as the *Kokumin Shimbun*, hitherto ardently pro-Axis, are saying that Japan will be faced with grave problems if Axis hegemony extends across the Urals into Asiatic Russia and that it is imperative that the geographical limits of Herr Hitler's "new order" and Japan's "sphere of prosperity in East Asia" should be clearly defined.

If the German review of the first week of the war on Russia was partly intended to impress Japan and induce her to have a go at Russia too, as is believed in some quarters in London, the result seems likely to be exactly contrary to what Herr Hitler expected.

There are signs that Japan had had a horrid shock. In 1936 she and Germany embraced each other in the anti-Comintern pact, swearing allegiance against Communism and all its works. In 1939, without a word to Japan, Herr Hitler swore equal allegiance with the previously execrated Bolsheviks. In 1940 the downfall of France enabled Herr Hitler, by playing on the greed of Japanese imperialists, to draw Japan into the tripartite treaty. In April, 1941, Herr Hitler further used his influence in Tokyo and Moscow to bring about the Russo-Japanese neutrality pact. And less than three months later, once more without a word to Japan, he again upset all her calculations by launching his armies at Russia.

Almost daily conferences of the highest military, naval and civil authorities at Prince Konoye's residence in Tokyo, give eloquent proof of the Japanese perplexity since these conferences normally are held only once a week.

Actually Japan is not obliged to do anything. Since it was Germany who attacked Russia and not vice versa, the tripartite treaty does not in any way oblige Japan to come to Germany's aid; while the pact with Russia does explicitly pledge her to remain neutral.

On the other hand, the "young officer" class in Japan, which in 1933 wanted to round off the occupation of Manchuria by seizing the Russian maritime provinces while Russia in the Far East was still weak, will argue that Japan must not miss this opportunity of pulverizing Russia's Far Eastern forces and staking out her claims against the possible appearance of Herr Hitler in Asia.

Against this the more sober-minded Japanese argue that if Japan now attacked Russia she might find herself at war with Britain and possibly with America too; and her recent acceptance of the Dutch rejection of her demands on the Netherlands East Indies shows clearly that she is not ready for that.

Soviet "Danger Zone"

Russia has proclaimed a "danger zone" in the Japan sea and the Sea of Okhotsk in order to safeguard shipping to Vladivostok, a Japanese Government spokesman said the Foreign Office had been informed. The spokesman, said the information, had been received from Lieutenant-General Yoshitsugu Tatekawa, Ambassador to Moscow.

The Moscow Embassy advised that mine fields had been established in many zones of the Russian Pacific coast, presumably on the grounds of the possibility of appearance of German warcraft.

The "danger zone" was designated in order to safeguard shipments to Moscow from possible German attack. The spokesman added, "Such a Soviet measure is unpleasant" because of the proximity of the waters in question to Japan. He said Japan had not protested against the action, however.

Asked if Japan intended to abide by the Russo-Japanese neutrality pact the spokesman replied the "pact stands at present." He declined to comment concerning the future. Has disclosures concerning the safety zone came in answer to questions regarding a story which appeared in the newspaper *Chugai Shogyo*, which said that Russia had designated a safe waterway for vessels bound for Vladivostok. He said Lt.-Gen. Tatekawa's information was to the same effect as that carried by the newspaper.

Berlin Expects Japan To Act

It is suggested in Berlin that Japan will shortly make Cabinet changes, including the dropping of Mr. Matsuoka as Foreign Minister, as a preliminary to revising her attitude towards Russia, according to the Berlin correspondent of the *Stockholms Tidningen*.

There is speculation in Berlin regarding whether Japan will seize Vladivostok following a "Russian disintegration," he adds.

Japan's decision is keenly awaited in Berlin, according to a Berlin dispatch to the *Social Democraten*, which adds that without doubt a lively exchange of views is at present going on between Tokyo and Berlin.

Political circles in Berlin profess to be optimistic, believing there are good grounds to suppose that Japanese neutrality will be no more than temporary.

Japan will, it is suggested, await America's attitude.

It is rumored in Berlin, the dispatch continues, that Japanese representatives abroad are shortly to meet in Madrid for a big conference which would be attended also by representatives of other Axis powers as well as Gen. Franco and Senor Suner, Spanish Foreign Minister.

It is suggested in Rome, according to the *Stockholms Tidningen*, that the Nazi-Soviet war will have the immediate effect of delaying a formal outbreak of war between the United States and the Axis despite the fact that the Communists are now in favor of United States intervention.

On the Trans-Siberian Railway

The following dispatch was written from Manchuli by Keishiro Iriye, Domei Staff Correspondent, who was one of the few to cross the Soviet-German border on the last train from Berlin when hostilities slashed communications.

"The trans-Siberian train which brought the Japanese evacuee party from Moscow late last night, five days overdue, was full of Russian soldiers, whose leaves had been cancelled due to the outbreak of the Soviet-German hostilities, and who were returning to their regiments in the Far East.

"The majority of troopers, accompanied by their wives and families, were on their way to Moscow for a visit to the Soviet capital when the war started.

"The five-day delay in train schedule is evidence that the Soviets are furiously rushing supplies, which were found in abundance all along the line, to the western front.

"West-bound trains were heavily loaded with trucks and tractors, as well as large numbers of tanks, armored cars, field artillery, ammunition and machine-guns. There also were many cars with field kitchens and oil tanks headed west. Red Army soldiers going west, however, were scarce.

"Congestion in the service was worse up to Omsk, 600 miles east of the Ural Range, from where the rail-line, eastward is single-track.

In the dreary stretch of Siberian steppes before Omsk, the train had to wait one, two and as much as five hours at a time at isolated sidings, while trains 50 and 60 cars long, loaded with supplies and equipment, rumbled past.

"The train which usually reaches Omsk in two days, did not arrive there until noon on July 2, the sixth day after leaving the Soviet capital.

"From Omsk the line is double tracked and the train made up for lost time. At Chita, where the Japanese group was greeted by Manchoukuo consular officials, passengers experienced the first blackout, leaving Chita Station in pitch darkness.

"At a small station 15 minutes from the Manchoukuo border, a Norwegian passenger, who was traveling to Shanghai from Berlin, was taken off the train by the Soviet authorities because his passport had expired."

JAPANESE-AMERICAN RELATIONS

Desires Friendship

Japan's hard working Premier, Prince Fumimaro Konoye, writes a United Press Correspondent told me in an interview that Japan is " very anxious " to maintain friendly relations with the United States and that he sees " no reason why the two countries cannot remain friendly."

I talked with Prince Konoye while officials were arriving in quick succession to confer on Japan's policy in view of the Soviet-German hostilities. The Premier had participated in dozens of such conferences in the previous week, but appeared in good health, calm and confident.

Declaring Japan's intention to " adhere to all her treaties,"—both with Germany and Russia—Prince Konoye said he believed the Germans might win the war on Russia's western front, but he expressed the opinion that Russia would not collapse or come under the rule of any regime other than M. Josef Stalin's.

The world-wide situation, Prince Konoye said, " is extremely delicate, and therefore I cannot say much about it." He predicted that Germany would not reach the Pacific through Russia.

Asked whether the new international situation might result in a change in Japanese-American relations, Prince Konoye replied :

" We are very anxious to maintain friendship with the United States. The German-Japanese alliance was designed to keep the United States from becoming involved in the European war. The purpose of the Tripartite pact is defensive in nature. I want the United States to understand its spirit. I do not see any reason why the two countries cannot remain friendly."

Although the remainder of the interview was conducted in Japanese through an interpreter. Prince Konoye spoke in English as he reiterated emphatically that Japan's pact with Germany was " defensive in nature."

Attitude of the U.S.

President Roosevelt does not intend to issue a " neutrality " proclamation on the Russo-German war, according to an announcement by Mr. Sumner Welles, Under-Secretary of State.

United States ships will thus be permitted to carry arms to Vladivostok. The United States is taking up the same position as she has maintained during the undeclared Sino-Japanese war.

Mr. Welles pointed out that under the Neutrality Act a neutrality proclamation is required when the President or Congress " shall find there exists a state of war between foreign states and that it is necessary to promote or preserve the peace of the United States or protect the lives of citizens of the United States."

He added that Mr. Roosevelt had authorized him to announce that, inasmuch as he finds a proclamation is unnecessary in the present instance to promote the peace of the United States or to protect American citizens, he has no intention of issuing a proclamation.

Asked what effect this would have on the transport of arms to Russia in American ships, Mr. Welles explained that combat zones already established by the President do not include the Pacific region.

Vladivostok will thus remain open to American ships carrying arms or any other supplies.

Under the Neutrality Act American ships are forbidden to carry arms to " belligerent " ports or to enter defined combat areas.

Warns of Pacific War

A note of strong warning against war spreading to the Pacific was sounded by Rear-Admiral Minoru Mayeda, spokesman of the Japanese Navy Ministry on the occasion of the fourth anniversary of the outbreak of the Sino-Japanese conflict.

The strengthening of naval and air bases by the United States Navy in the Pacific, as well as the expansion of the United States Fleet itself, Rear-Admiral Mayeda declared, is directed solely against Japan, while no less an important fact is that the Netherlands East Indies, Australia, the Philippines and New Zealand are attempting to encircle Japan by rallying under the United States banner.

Needless to say, the Chungking regime will adhere firmly to this joint anti-Japanese front, he added.

In a signed article appearing in the *Asahi Shimbun*. Rear-Admiral Mayeda declared, " As a sequel to the German-Soviet war, the northern Pacific situation claims our most serious attention in the light of the United States' announced aid to the Soviet Union."

" When it is remembered that the United States acquired important naval and air bases in the Atlantic in return for 50 destroyers which were transferred to Britain, no one can tell that the United States will not resort to the same trick in the Pacific and seek warlike concessions from the Soviet Union in return for so-called aid.

" Should this alarming development come true, Japanese sense of security in the northern Pacific would be dashed to the ground. A crisis of major proportions would develop in the Japan Sea area if Vladivostok were to become involved in such a deal between the United States and the U.S.S.R.

Stressing that the Sino-Japanese conflict is not limited to Asia, but has become part of the world-wide disturbance, Rear-Admiral Mayeda urged the nation not to restrict its attention to developments in China, but prepare against a new conflagration which might sweep across the Pacific.

The spokesman assured the nation, however, that the Imperial Navy is fully prepared against any emergency, and is convinced of its invincibility should it be called upon to act.

U.S. Watches Japan

America's chief interest is focussed on the new Russian phase of the European war, but there is keen secondary interest in the situation presented to Japan by this unexpected development.

Japan is seen as being constantly embarrassed by her Axis friends. No sooner has she signed the Anti-Comintern Pact in Berlin than Germany shakes hands with Japan's hitherto mortal enemy, Red Russia. It took Japan almost two years to come to the full circle and make a friendship treaty with Russia which, like a soldier's love letter, was sealed with a kiss. Again, no sooner is this accomplished, than Berlin shocks Tokyo by attacking the new-found " friend " of Japan.

There is small wonder here that Tokyo dispatches describe the German act as being received in silence, and there is speculation as to what the " Bushido " will dictate shall be done to end this list of public embarrassments of a nation whose " face " is of such national importance.

These various switches of Japanese policy, plus another switch now if Japan follows Berlin's dictate, serve chiefly to indicate to informed observers of Far Eastern affairs that Japan is less interested in any political hitching of her ricsha to any Axis star than she is in hitching it to whatever power and power-machine looks most likely to create conditions in which Japan's cherished expansionist ambitions can most quickly come to fruition.

In other words, Washington observers state, there is no Japanese policy other than of the opportunist variety, whose aim is hegemony of Asia—at least to begin with, if Japan foresees the early defeat of Russia at German hands and consequently new opportunities for aggression either against Siberia or in the south towards the Dutch Indies.

She may, many think, regret her recent pact with Russia, but will probably remember that Britain and the United States have given Russia moral support, which is likely to be backed up by considerable material aid.

Tokyo's actions in the near future will be watched with much interest. Her ambitions are known. According to the same observers, Japan has long openly coveted the Siberian seaboard, which would give her control of Vladivostok, from which every important Japanese town can be bombed, and which would also give her control of important, valuable fisheries which she now has to lease from the Soviets.

Sees Japan Disillusioned

Senator Elbert D. Thomas, Democrat of Utah and foreign relations specialist, told the United Press in Washington that the chief question raised by the Russo-German war was Japan's reaction.

"Japan will need now her great statesmanship to determine the wisest course in the face of this gigantic development," Senator Thomas said. "I think Japan must now be disillusioned with her attachment to the Axis and sees she has been making friends with the wrong nations."

Senator Thomas, who often has acted as an Administration spokesman, said he was a former friend of Japan, where he resided for a long time.

"I think Japan will see the mistake she has been making in aligning herself with the Nazis, especially if Mr. Matsuoka (Japanese Foreign Minister), was warned of this development by Chancellor Hitler before he went to Moscow," Senator Thomas said.

The Senator said he doubted whether Japan would now adhere to the Axis.

"Attacking Russia would only extend Japan's lines of supply and communications," Senator Thomas said. "It would mean announcement of abandonment of all hope of expanding southward for some time and would give fresh impetus to China's guerilla warfare."

Senator Thomas said the United States' greatest need now was for complete national unity.

"Grave Decisions"

Mr. Joseph C. Grew, United States Ambassador, addressing the American Club at Tokyo on the occasion of Independence Day, asserted that the United States, with the rest of the world, was passing through a time of storm and stress and a time calling for grave decisions and resolute action based on those decisions.

Speaking to more than 250 guests, who attended the July Fourth reception, including the British Ambassador, Sir Robert Craigie, and the Australian Minister, Sir John Latham, Mr. Grew added that we are no longer drifting nor lying at anchor; we are beating against the headwinds but we are sailing—resolutely sailing.

"Democracy, as perhaps never before, is being put to the test. Civilization, as we have known it, is at stake. Humanity is at stake.

"At this time it is of the highest importance that we should renew and rekindle our faith in our country and all that our country stands for; that as a nation and a people we should present an absolutely united front. I have not an iota of doubt that those headwinds will be ours to turn to fair.

"Democracy will win. Civilization will win. Humanity will win, because in the conduct of human affairs the constructive forces will always and inevitably in the long run triumph over the forces of destruction.

"But in sailing toward our objective, our members of the crew must pledge our skipper undivided confidence.

"We have chosen him by the process of Democracy and a true test of Democracy lies in the fullness, sureness and unity of the support we give him. Gentlemen: the President."

Anticipates Blockade

Diplomatic circles, commenting on the disclosure in Tokyo that Japan was considering creation of a "safety zone" in the northwestern Pacific, were inclined to believe that Japan was in reality contemplating establishing a practical blockade against commercial shipping of war supplies to Soviet Russia via Vladivostok.

Such a *de facto* blockade would clash directly with the United States policy of maintaining freedom of the high seas, and probably would cause serious tension between the United States and Japan.

The Japanese suggestion that the safety zone would be similar to the zone established around the western hemisphere was totally irrelevant, according to informed quarters in Washington. Whereas Japan's purpose appeared to be exclusion of cargo ships carrying supplies to Russia over the free seas, the purpose of establishing the American safety zone was to protect and facilitate normal commercial communications.

The American zone does not exclude any merchantmen, and the patrol does not even seek to prevent the free movement of belligerent warships, but only undertakes to prevent warships from engaging in "hostile acts" within the zone. That means that such warships should refrain from combat or from harassing of commercial shipping within the zone.

Authorities commented that if the Japanese attempted to restrict movements of cargo ships near their waters on the pretext that the American "safety zone" established precedent for such action, they would be merely distorting for their own purposes an American doctrine.

Assails U.S. Attitude

"Stoppage of United States assistance to Japan's enemy, and the changing of the United States prejudicial attitude that whatever the U.S. does is right, and whatever Japan does is wrong, are two ways by which peace in the Pacific, hoped for by Mr. Sumner Welles, U.S. Under-Secretary of State, may be best achieved," Lieut.-Col. Kunio Akiyama, local Japanese Army spokesman, declared at a press conference.

The spokesman added that he fully agreed with Mr. Welles' peace wishes for the Pacific.

Elucidating further, Colonel Akiyama pointed out the inconsistencies of United States policy as exemplified by the fact that the U.S. adopted a "closed door" policy, while insisting on Japan's following the "open door" policy.

Citing a psychological instance of America's closed door policy, the spokesman declared that the United States adopted a policy of discrimination, for instance, by forbidding entry of Japanese immigrants.

Colonel Akiyama pointed out that while Mr. Welles was voicing hopes for peace in the Pacific, the United States was openly sending war supplies to Chungking, thereby prolonging hostilities on the China continent.

The spokesman stressed that the "Pacific" must include islands in the Pacific, and the Asiatic continent, as well as the ocean.

He added it would be interesting to watch whether the United States would still support Chungking despite Mr. Welles' public announcement for peace in the Pacific.

Asked if peace in the Pacific was impossible with continued American aid to Chungking the spokesman said "That cannot be said," adding "Japan has been trying to maintain peace in the Pacific despite United States aid to Chungking."

Colonel Akiyama declared that Japan, however, would respond to Mr. Welles' hope for peace, and continue endeavors to maintain peace.

"Hostile Actions"

Under the caption "Stop America's Hostile Actions," the *Nichi-Nichi* this morning bluntly asserted that Brigadier-General Henry Claggett's recent visit to Chungking was the latest evidence of United States hostility toward Japan, and urged Japan to act "quickly and effectively" to prevent the United States from using Chungking as a first line of defense against Japan.

The *Nichi-Nichi* declared that Brigadier-General Claggett's trip had a twofold purpose: first, to rebuild Chungking's air force, and secondly, to establish a United States-Chungking air alliance aimed directly at Japan.

While dismissing possible efforts by the United States to reconstruct Chungking's air force as "doubtful," in view of the present supremacy of the Japanese air forces, and also in view of the more important and urgent British requirements, the *Nichi-Nichi* nevertheless said that Japan should adopt a vigorous policy toward all United States attempts to aid Chungking.

The daily declared that the reason for United States avoidance of a deterioration of Japanese-American relations was nothing more than a desire on the part of America to make aid to Britain as effective as possible. "As long as the United States maintains such an attitude, it is impossible to effect genuine peace between Japan and America," the *Nichi-Nichi* declared.

Asserting that the United States, in aiding Chungking, had merely prolonged and increased the miseries of the Chinese people, the *Nichi-Nichi* concluded, "America should re-examine the Far Eastern situation from a broad viewpoint to establish lasting peace in the Pacific and to strive to form logical and realistic decisions."

ON THE CHINESE SCENE

Causes and Effects

Japan's announced official determination to respect both the Tripartite Pact and the Soviet-Japanese neutrality pact was reported to have been the result of an agreement between Tokyo and Berlin under which Japan would continue efforts to prevent United States participation in the European war in return for recognition by the Tripartite powers of the Nanking Government.

The Japanese believed that recognition of Nanking bolstered Tokyo's policy of seeking to achieve disintegration of Chungking through support of Mr. Wang Ching-wei—and as far as Japan is concerned, settlement of the China conflict is her predominantly major problem.

Non-Axis observers believed that recognition of the Nanking Government prevented Japan from adopting a completely independent international policy, and as a result this conceivably could be considered another German diplomatic victory.

Axis quarters in Tokyo appeared to be indifferent as to whether the Japanese should attack Soviet Russia. This apparently was due to the belief that American aid, via Vladivostok, would be too late. These quarters, however, were doing their utmost to discourage American entry into the European war through intensification of Japanese-American tension.

Axis quarters in Tokyo foresee increasing tension between Japan and the United States as long as Japan remains committed to Nanking, a status which is irreconcilable with American policy. This was considered especially true because the United States was increasing her aid to Chungking while Russian aid was declining, thereby making the United States the principle power behind Generalissimo Chiang Kai-shek.

Axis recognition of Nanking, therefore, served further to commit Japan toward Mr. Wang Ching-wei and rendered even more remote the possibility of a Japanese-American compromise over China.

Axis recognition of Nanking also gave the Japanese something to talk about on the Fourth Anniversary of the war, in the absence of any recent impressive military successes.

Mr. Wang's Visit to Japan

Completing a trip to Japan where he was feted and honored by His Majesty, Japanese officialdom, and the people, Mr. Wang Ching-wei, President of the Nanking Government, returned to Nanking on June 28.

During his historic two-week visit to Japan, Mr. Wang conferred with the highest leaders of the Japanese Government who reiterated their determination to accord the fullest aid to the Nanking administration.

With Mr. Wang's return to the capital, it was expected that every effort will be made to further the attainment of the ideal of peace and reconstruction. Political observers expected that Mr. Wang will immediately summon a conference of the highest leaders of the Nanking Government, including the presidents of the Yuans and the heads of all Ministries, to inform them of his conversations with Tokyo officials.

Mr. Wang, it was expected, will not only urge redoubled efforts on the part of tde Nanking Government to realize its ideals, but join in a discussion of concrete plans which are to be taken by the Nanking government in the light of Mr. Wang's conversations with Japanese leaders.

Programs worked out during these conferences, which can be put into effect immediately, will be done by the Nanking government while those programs which must be carried out jointly by Japan and China will be deferred until Dr. Kumataro Honda, Japanese Ambassador to China, returns to Nanking.

Eight Powers Recognize Nanking

Germany, Italy, Spain, Hungary, Bulgaria, Rumania, Slovakia and Croatia formally have accorded *de jure* recognition to the Nanking Government. Herr Joachim Ribbentrop, Reichsminister of Foreign Affairs, and Count Galeazzo Ciano, Italian Foreign Minister, on July 1, notified the Foreign Minister (Mr. Hsu Liang) of the National Government of the steps taken by their respective governments.

With mutual diplomatic recognition completed, it was expected that an exchange of ambassadors will take place in the near future, thus bringing about the resumption of normal diplomatic relations between Nanking, and Germany, Italy and the other Powers.

While no definite announcement has been made by either Berlin or Rome regarding the envoy likely to be accredited to Nanking, quarters close to the Nanking Foreign Ministry expected that Marquis Francesco Maria Taliani de Marchio, Italian Ambassador now staying in Shanghai, will present his credentials to Mr. Wang Ching-wei in the near future.

Marquis Taliani de Marchio, it was recalled, has not yet presented his credentials to Mr. Lin Sen of the Chungking government. The German envoy, it was expected, will be either Dr. F. Altenburg, or Mr. M. Fischer, who recently returned to China from Japan.

Appointment of Nanking's envoys to Berlin and Rome was the subject of important deliberations during a meeting of the Executive Yuan of the Nanking Government. Well-informed sources declared that Mr. Tang Leang-li, Ambassador-at-Large and Chairman of the International Publicity Board, will be accredited as first Nanking Ambassador to Rome.

Born in Java, and a graduate of London University, Mr. Tang, though only 40 years of age, is regarded as one of the Nanking Administration's most promising and able diplomats.

The Nanking Government's envoy to Germany, it was expected, will be chosen from supporters of the Nanking Government who are now residing in Europe.

Meanwhile, formal recognition by Germany and Italy of the Nanking government was highly welcomed in both official and unofficial circles.

Formal recognition of Nanking by Berlin and Rome, it was pointed out significantly, will be a blow to Chungking more so because it comes on the heels of Mr. Wang Chung-wei's historic trip to Japan, and Japan's extension of credits totalling Y300,000,000 to the Nanking Administration.

Full diplomatic recognition of the Nanking Government by Germany and Italy, observers declared, definitely foreshadows the participation of China in the Tripartite Alliance.

Should France accord diplomatic recognition to Nanking, it was believed that the thousands of Chinese in French Indo-China will come to support the Nanking Government.

Support of the Nanking Administration by these Chinese, it was pointed out, would cause a stoppage of large remittances to the Chungking regime causing a further weakening of the financial structure of the Chiang Kai-shek administration.

The Nanking Government, authoritative sources stressed will continue in the future the closest co-operation with Japan for the establishment of a New Order in East Asia. All pressure possible will be exerted on the Chungking regime to effect the realization of peace in East Asia.

Reaction at Washington

Axis recognition of the Nanking regime in no way changes United States policy, and this nation will continue to recognize Chungking as the only legitimate government of China, Mr. Sumner Welles, Under-Secretary of State, said at Washington.

There were indications that the United States tended to discount significance of the move, except as an inducement to Japan to remain friendly to the Axis.

Observers noted that the timing of the recognition seemed to reflect a feeling that the Axis Powers were fearful that Japan was wavering in her pro-Axis sentiments, therefore, they were determined to do everything posible in a diplomatic way to help Japan " stay in line."

Observers pointed out that the Nanking regime was set up more than six months ago and that only now the Axis Powers recognized it.

Tea Leaves from Lo Pat's Garden

by Shamus A'Rabbitt

The true journalist knows
Something about everything and
Not much about anything
But if he should interview the Devil
He could write more interesting news about Hell
Than the Devil himself.

◆◆◆◆◆◆

Life answers
The riddle
Of the Sphinx—

◆◆◆◆◆◆

As we look at life
It looks to us
Revealing itself only to those
Who woo it
And the revelation is commensurate
With the intensity of the wooing.

◆◆◆◆◆◆

Our souls are reflected
In our faces
And our hearts in the faces
Of our family and friends.

◆◆◆◆◆◆

The image of our individuality
Is printed
On the fabric of our lives
And soon or late
It will be read or forgotten.

◆◆◆◆◆◆

Truth is the traffic light
On the road
To romance.

◆◆◆◆◆◆

The joy of courtship
Is the forgetfulness of faults.

◆◆◆◆◆◆

If the courtesy of courtship
Were practiced in marriage
The divorce courts
Would become matrimonial agencies.

◆◆◆◆◆◆

We invest the silent man
With an interest
Equal to our own genius.

Youth of mind
Gives zest to life—
Regardless of
Our waning years.

◆◆◆◆◆◆

Youth needs reality
To woo experience
That weds memory
For companionship in maturity.

◆◆◆◆◆◆

Youth may be the heyday of love
But Dame Trouble complaineth bitterly
Of the failure of youth to embrace her.

◆◆◆◆◆◆

The haze of purity
Enveloping the past
Is like the silvery hairs
That make us seem virtuous
When we have but forgotten
The errors of our youth.

◆◆◆◆◆◆

Perfection is a goal
That recedes as we grow.

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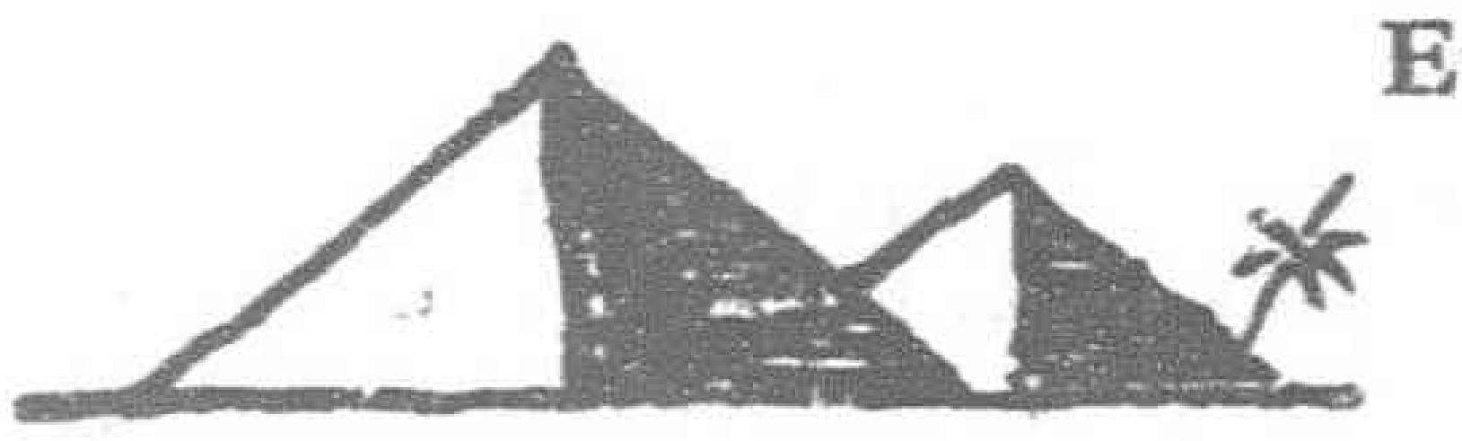

Even the foibles of the great
May be immortalized.

◆◆◆◆◆◆

The mistakes of the great
Are but accessories to their tasks.

◆◆◆◆◆◆

Some are so rapacious
That if we bid them "Good Morning !"
They will ask for a loan.

◆◆◆◆◆◆

If we were required to write our own obituary
The world would know our handicaps.

◆◆◆◆◆◆

If we were required to write
Our inmost thoughts
Virtue would need
No champion.

Whither the China War?

By IPPEI FUKUDA

In his war diary recently published, Lieut.-Colonel Ichiki gives a graphic account of the puny origin of the now four-year old colossal struggle between 400,000,000 people of China and the only undisputed first-class Power in Asia, Japan.

On the night of July 7, 1937, he writes, he and his men were out on one of the frequent night manoeuvers which the Japanese North China Garrison Forces had been holding for some time on the outskirts of Peking. The officer was both angered and embarrassed when the Chinese suddenly fired at the troops under his command: angered because of the Chinese resorting to covert gun-play; embarrassed over his inability to take action to find out who the offenders were and how to bring them to some sort of accountability. He was well aware that wild shots fired in the dead of night would hardly carry weight as evidence against miscreants of any nationality, least of all those of unfathomable China.

While he stood there in the officers' quarters, temporizing with various ways of going about it, the telephone rang. Corps Commander Colonel Mutaguchi was at the other end of the wire.

"Again they fired, sir," the younger officer reported, irritated, "and the more I think of the matter the more am I convinced that nothing short of our attacking the bridgehead of Lukouchiao will bring the Chinese to reason. The chance of our getting results otherwise seems to be very remote. Would you approve my contemplated action, sir?" After a long pause came the Corps Commander's reply in the affirmative.

"You have my permission, Lieutenant-Colonel," said he in a deliberate voice, "to act as you propose. It is 4.20 by my watch," was the Corps Commander's significant remark before he rang off.

To Lieut.-Colonel Ichiki, the words of his chief seemed to leave no room either for doubt or hesitancy. Naturally, the two officers were by no means blind to the enormity of consequences to the step they had decided upon. Anyway, the Lukouchiao incident occurred ten minutes after the telephone parley on that fateful night. The inevitable thus hit the Continent of Asia with all the furies of a long pent-up storm.

How Hostilities Expanded

Apart from fierce positional fighting in its earlier stage, the China War has steadily deteriorated into a continuation of hide-and-seek surprises on both sides. After they lost Nanking, Hankow and Wuhu, the Chungking forces came to realize the futility of seeking to stem and roll back the Japanese through large-scale encounters because of their obvious limitations in modern equipment. And as the war front went on unfolding itself almost endlessly until it reached the unprecedented record of 4,200 miles from the Great Wall in the north down to the tropical jungle frontiers around Indo-China in the south, General Chiang Kai-shek began to rely more and more on the primitive tactics of taking the fullest possible advantage of the geographical features of "Free China" and his numerically superior manpower.

On the fourth anniversary of the War's beginning, Dr. Quo Tai-chi, Chungking's Foreign Minister, stated that for all the new developments in Europe and elsewhere China's foreign policy would pursue an unwavering, consistent course. From the beginning of the Incident, it has no doubt been consistent in that "Free China" has firmly kept its wheels on the single track leading to more and yet more aid from the United States and Britain. In the present vista of international politics, Chungking's decision one way or another in regard to the German-Soviet war, for instance, would arouse but little interest beyond East Asia and affect the world situation less since no Western country would be fooled into banking on its support or standing in awe of its threat to attack.

By and large, "Free China" is seen in possession of a number of singular advantages over Japan in that while the former is in a position to pursue a consistent foreign policy of ever asking for alms and arms from the Democracies without the least fear of being called upon to do its bit in return some day, the latter's path is fraught with stupendous obligations and Premier Prince Konoye and Foreign Minister Matsuoka have got to pick their way very carefully, particularly in face of the further spread of crisis over Europe and in the Atlantic. There can be no doubt that four years of war in China have written off a good deal of her financial resources and manpower, but even the hardest boiled skeptic would admit that Japan still remains a solvent nation, notwithstanding, ready to meet her political or military obligations at any cost and in any part of the world. Unlike that of Chungking, her decision either to keep clear of the European cross-fire or elbow her way into the thick of it will have truly terrific repercussions.

Incalculable Losses

Four years of ceaseless fighting now here and now there along the far-flung front cost Japan 109,250 men killed, according to an official statement issued by Imperial Headquarters on the eve of the anniversary. The figures include the toll of lives claimed by expensive side-issues which precipitated clashes between Japanese and Soviet troops at Changkufeng and Nomonhan in 1938-1939. During the same period, adds the statement, China lost 2,015,000 dead while some 3,800,000 either were captured or deserted to the Japanese. It is indeed an impressive list. But far more upsetting will be a report, when and if it is made public, on the extent of devastation inflicted on China's economic life by the hostilities.

The foregoing estimates of the war dead on both sides make a grim story. And yet thought should be had of the bearing of such staggering havoc in lives and property on the very aim which originally prompted Japan to go into Manchuria in 1931. Her leaders meant then, as they certainly do now, to set up an autarchy of Asia which has been familiarized since as "a co-prosperity sphere in East Asia."

It should be obvious to anyone that extensive and progressively intensified destruction caused by the war in China would hardly make for creation of co-prosperity. To the contrary, every thinking Japanese, and every thinking Chinese as well for that matter, will have reason to wince at the spectacle of millions of poor Chinese finding the postwar China a dreary expanse of "scorched earth." The position will become increasingly untenable for its sponsors as the war drags on.

As for General Chiang Kai-shek and his followers, there are always clipper planes to take them to the United States or some other haven where they can live in delectable exile should the war end in their defeat. They are all men of means with money in foreign banks. All in all, the great socialist leader, Dr. Sun Yat-sen, seems to have had the interest of his people closer to his heart than the present arbiters of China's destiny. I honestly wish that later events may prove my misgivings to be those of a pessimist bent on cavilling at truly great men and a greater nation.

Possibilities Reviewed

Among the broadcasts made by Japanese leaders in greeting the fifth year of the China war there was one full of optimism. A General was heard to mark the occasion by telling his audience that at last the "military phase of the China Incident" was almost at an end. The comment coming as it did from a man who was in a position to know the "phase" he was talking about appeared significant. I remember a press interview given last May in Kyoto by Mr. Kumataro Honda, Japanese Ambassador to Nanking, who was on his way back to Tokyo to urge his Government to give further aid to Mr. Wang Ching-wei. In part, the Ambassador pointed out that Japan would never be so faithless as to abandon the Nanking regime and enter into direct peace negotiations with Chungking, the time for which, in his opinion, had definitely passed.

Ordinarily one would give credit to any outstanding representative of the Japanese Government if he is found pulling this wire and that in order to arrive at arrangements for peace in the Far East. Could Ambassador Honda's categorical disavowal of any intention to do so on behalf of his Government mean that he had despaired of peace negotiations? Conflicting as they appear, the two statements, in fact hang together to tell of an unmistakable trend. Incidentally, it must be frankly admitted that the press, not only in Japan, but throughout the world has never been confronted by such a wholesale ban on reporting the truth as it is to-day. It is alienated from the truth, leaving the political commentator no alternative than to labor on droppings to form a theory of his own. And here is my theory on the major significance of the arrival of the fifth year to the China Incident.

Three Elements in Situation

Like everywhere else, there are realists among leaders of the Japanese nation. After four years of hostilities, these men have begun to see China drifting steadily toward disintegration into three fairly airtight compartments. It does not matter much now whether they welcome the crystallizing of an unfamiliar China or not. Nothing will avert the change. Nor is the disruption likely to be short lived.

With Chungking in no mood to come to terms at present with either Tokyo or Nanking, it will continue to keep a large share of the split under its control. That is the first group. Then there are the Chinese Communists who, in the event of Soviet Russia coming out comparatively unshaken from her present struggle with the Third Reich, may present a more complicated and formidable problem than Chiang Kai-shek's kingdom as their almost superhuman power of penetration will certainly be abetted by their comrades in the north. Thus the area claimed by them will stand a better chance of growing in influence than other counterparts of China. Last but not least comes the Nanking Government. At the time of its installation, Mr. Wang Ching-wei's regime, which appeared to some wiseacres to be no better than froth in an ice cream soda, will firmly hold its own after the split-up. Again, whether Japan likes it or not, her realists envisages such a future for China and demand that her policy be revamped accordingly.

Such conclusions promise no hope of immediate solution of or even marked abatement in the China Incident. Moreover, prolongation of the campaign in China should take into consideration some safeguards against further deterioration of the world situation *vis-à-vis* Japan and excessive drains on her economic resources. It is reassuring to be told in face of accumulating difficulties by men like Admiral Sankichi Takahashi that steps have been taken by the Government to see the people through any number of war years without subjecting them to want.

In reviewing the high lights of a possible Japanese-American war, the Admiral asserts that Japan has accumulated sufficient materials to withstand the effects of a long range American naval blockade for years. We are told by another equally competent expert that more than 1,000,000 tons have been added to the Japanese merchant fleet since the outbreak of the China war.

Fruits of Sacrifices

These chance remarks tend to imply that not all of Japan's efforts for the last four years have been devoted to increased production of tanks, aircraft, munitions and warships. At the expense of our pre-war standard of living, foodstuffs and coal, for example, have obviously been piled up for use under more stringent circumstances. It is not improbable that a certain measure of self-sufficiency is being worked out in anticipation of the worst. A sense of security behind the firing-lines may bolster up the Island Empire's determination to swing the China Incident into victory. Outnumbered by the Chinese as she is all the way along the 4,200 mile front, the deficiency in her manpower can be made good by further modernization of her fighting forces. Her mechanized units organized on the model of Panzer battalions are said to be already in existence somewhere, standing by for orders to take action.

Now that the futility of drawing Chungking into a roundtable conference to discuss peace is brought home to the Japanese Government, the only course left open for it is to stage an armed sit-down strike against the hordes under General Chiang Kai-shek. That seems to me to be the likeliest move under contemplation by most Japanese leaders. Even if they agree on this line of policy, their decision of course would not preclude fresh explorations into the field of peace-making from time to time. So far the usefulness of Mr. Wang Ching-wei's Government at Nanking in bringing about peace has been practically nil. The Nanking leader went to Tokyo last June.

"The purpose of my visit to Japan," he said upon his arrival in the Japanese capital, "is to tender an expression of gratitude for the goodwill of your country which has been supporting my country as well as to exchange views with your Government authorities regarding various fundamental questions calling for the co-operation of our two countries." He got back to Nanking with a loan of Y300,000,000 lining his pockets.

Fundamental Questions

It would be unjust and askew of the truth, however, to suppose that President Wang of Nanking was only after Japan's financial help. In the same statement he explained what he had in mind when he referred to "various fundamental questions."

"I do not hesitate to declare," added he, "that in my country both Government and people are equally exerting persistent efforts for realization of the three principles, namely good-neighborly and amicable relations, joint defense against Communism and economic co-operation—principles previously declared by Prime Minister Konoye—and to fulfil the terms of the basic treaty between Japan and China."

It should be recalled that at the time when Mr. Wang Ching-wei was busy rallying about him Chinese sympathizers for his daring plan to put up a government of his own at Nanking, Prince Konoye assured him and the whole world that Japan would neither grab China's territory nor seek war indemnity. Perhaps Mr. Wang, in his frequent exchanges of views with Japanese statesmen, wanted to find out whether or no their solemn disavowals of imperialistic designs on China held good to-day in the light of subsequent progress of the war in China. If there were no gold bricks, why the road to peace with Chungking via Nanking might be negotiated. Having been prominent among the same Chinese leaders now ensconced in the war-time capital of Chungking, he knows of a number of them who are still alive to political good sense. After all, any approach to pacific settlement of the China war will have to follow the lines expressly indicated by Prince Konoye in 1938, if such endeavor is to prove a success.

The Mid-Year Herald—The Hong List

HERALD of the mid-summer season, Shanghai's scarlet-clad harbinger—the Hong List—has made its unfailing appearance to proclaim once again that, despite all the vicissitudes and hardships of the times, Shanghai and its inhabitants, native and alien, are carrying on. In its July mid-year edition, this is Shanghai's City Directory, the one book that is held in every office and business establishment to be indispensable, because this one book tells more than any other about Shanghai and its population. The Hong List, established in the life of Shanghai through many years, is published by The North-China Daily News & Herald.

The July edition of the Hong List, unlike the main edition that appears annually in January and covers all the major centers of population in China, is confined to Shanghai, and brings up to the minute all the diverse information about the shifting human tide in the Port of Shanghai and about the business and professional enterprises of the Port.

Besides miscellaneous information in the opening pages giving Calendars, Holidays, Postal Rates, Weights and Measures and dates of Racing Fixtures, the new Hong List, following the practice of past years, is divided into a number of sections. Here, separated for the convenience of the reader, are listed all firms, institutions, missions, embassies, consulates, armed contingents and the like, with staffs arranged alphabetically. Brought up to date is the valuable section devoted to Agencies, in which the reader may find the name and address of the dealer in Shanghai from whom to obtain standard commodities manufactured abroad.

In the section devoted to the "Mercantile Marine" a directory of foreign officers and engineers serving on coast steamers is listed.

An alphabetical list of business and professional people with their office addresses is set forth in the section "Shanghai's Who's Who." The "Streets Directory" lists the names of all streets in Shanghai in English and Chinese, giving the names of the occupants of all foreign and many Chinese houses, offices and stores. In the "Residential Directory" are listed the foreign residents of Shanghai and many Chinese with their private addresses.

The book is on sale at the office of the Publisher, the North-China Daily News & Herald Ltd., on the Bund and at all News Agencies at the price of Sh. $25.00.

China and Her Foreign Advisers

By WILLIAM HOSOKAWA

After four years of unremitting warfare in Asia the basis for a lasting peace between China and Japan is still not in sight. Militarily the undeclared war has been in stalemate for many months, the frequent Japanese offensives, both on land and in the air, resulting usually in local successes which fail to affect the larger issue. The future is heavy with uncertainties and none can say with assurance what form it will take. Very likely, it will not be until after the end of the war in Europe that the Far East will learn just where it stands.

But even as the guns rumble both Chungking China and Nanking China are fighting toward normalcy, the first with the aid, mainly, of the United States, the second with the guidance and assistance of Japan. Thus we see a steady stream of technical experts and advisers named by the United States Government journeying to Chungking just as experts and advisers shuttle between Nanking and Tokyo. It is indisputable, then, that both Chinese governments are under the influence of mentor governments to a not inconsiderable degree, and both can ill-afford not to accept the presence and counsel of these foreign experts.

There are, of course, certain differences between the character of the Japanese and American experts, but in the last analysis they are in similar positions—that of guiding and counselling a less advanced administrative regime. Their approach to their problems, however, are quite different. American advisers, at least before they reach their posts, seem to adopt the attitude that China is a full-fledged democratic world power while the Japanese with a more realistic view are practical about the problems that have made their presence necessary.

Mr. Owen Lattimore, for instance, named as the Generalissimo's political adviser by President Roosevelt himself, is quoted as saying that " one sweeping result of China's four-year fight against Japanese aggression is that China has become a major world Power." While no one will dispute that Chiang has united his half of China as never before, the contention that China has become a world power within four years is open to debate. China, to be sure, figures more prominently on the world scene than ever before in her modern history, but that does not qualify her as a world power.

It is to be expected of course that Mr. Lattimore and others in similar positions must say flattering things about the country to which they are being dispatched. But that is not approaching a very real problem in a realistic manner. Such praise, ill-deserved as it is, may be designed to bolster Chungking's morale but its ultimate effect, it seems, is to provoke a false sense of pride and accomplishment.

The Basic Essentials

China's problems are many. Those closest to her welfare have to do with the well-being of a backward and unenlightened people. These are problems that have to be tackled from their roots, deep within the masses, rather than from the fanciful premises that here is a major world power. China's strength, as that of any other nation, derives not from the upper classes, but from the vast body of the common people. Most of these common people are still living in a bye-gone age. Shanghai is not representative of China, nor is Chungking for that matter. The pitifully small strides toward modernity made in the urban centers is but a small portion of the huge entity of China, and the overwhelming bulk still lies benighted, unwashed and illiterate in the great, endless rural zones. If China is to progress as she certainly must, the means is not by extolling her virtues and praising the efforts of a few brilliant, well-educated, finely polished statesmen and international figures. That work must start democratically from the very bottom strata and progress upwards.

These are some facts about the nation which many influential Americans have referred to in all seriousness as Asia's last democracy: No census of the nation has ever been taken. Not even the officials in Chungking know with any reasonable accuracy just how many people there are in the land. The illiteracy rate is anywhere from an estimated 70 per cent to 90 per cent of an estimated 450,000,000 people. No popular election has ever been held and no constitution exists. Periodic famines, floods and pestilences kill millions of persons and relief is difficult because of lack of transportation and communications. Superstitions against modern science hold back the masses from hygienic progress and only recently those most exposed to western ways have accepted preventative innoculations against such prevalent diseases as cholera and typhoid fever. Standards of living are so low and manpower so cheap that it is more economical to use coolie power than to purchase modern machinery and pay for fuel. Especially in urban industrial centers is their pitiless exploitation of the working classes. No matter how highly China is regarded in present-day international relations, the stigma of extraterritoriality looms over her sovereignty.

These instances are mentioned solely to point out that China is hardly in a state to be referred to with any degree of accuracy, as a world power. Any effort to aid China on the assumption that she is a modern nation is a fundamental error because China's uplift must start with the masses. China's backbone is her people. She was the so-called sick nation of Asia because her people were not given a chance to progress, and her effort to modernize was concentrated in a small and not always unselfish group of leaders who endeavored to lead but not enlighten the masses. The experiment of building on an unsound backbone failed, and now the mistake must not be repeated. The process must be reversed; work must start from the bottom up and not from the top down, the masses taught to react intelligently to leadership. All this has been sadly absent from China's program in the past.

The world seems to have got the idea that the few well-educated and personable individuals who went abroad to study or to represent the Chinese government were representative of the Chinese people. Naturally enough the well-intentioned westerner judged the country by its few representatives and believed China a modern nation while those who knew differently were busy exploiting this rich area. That has brought about the sad plight of the China of to-day.

A Notable Experiment

Little can be said in praise of Japan's military occupation of China except that the intentions expressed at various times have been good. To date military exigency has obstructed the fulfilment of many of the plans, and in the course of developments many of the original ideals have gone askew. But with the gradual strengthening of the Wang Ching-wei regime in Nanking more and more concrete results of the plan to reconstruct China are becoming visible. In their favor it must be said they are realistic and they start from the bottom.

A prime example is the so-called model zone planned for a large area south of the Yangtze lying between Soochow and Nanking. Every detail of administration in this zone, after it is first cleaned of guerrilla by Japanese troops, will be left to Chinese officials. Here the common man will be given security, the opportunity to educate his children, raise his living standards, freedom from oppressive taxation—all things that he has never experienced before. This model zone is to be the inspiration for other areas where similar favorable conditions are to be introduced as soon as possible.

Whatever view one holds of Japanese policy and the Nanking regime, it cannot be denied that this is a practical, realistic way of attacking the root of the Chinese problem. It is a more practical and realistic if long-range way of preparing China for a position in the family of nations than proclaiming her a world power and treating her as such while there still is chaos in her internal affairs.

The problem of China is so huge that an extreme long-range view must be taken. Let us put it this way. The Magna Charta, the document which marked the first step toward democratic form of rule, was signed by King John in 1215. It was more than 550 years later, in 1776 that things developed to the point where the

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The Future of the "Two-Ocean" Fleet

By MASANORI ITO

(Contemporary Japan)

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* * *

A TWO-OCEAN Fleet for the United States which appeared like a dream on its first mention in Congress in the session of February, 1938, was provided for by legislation only two years later. This development so contrary to all expectation at that time was, it may safely be said, forced on the United States by the developments of the European war. In February, 1938, Congress was in the midst of discussion on the second Vinson plan for naval expansion. A question was then raised by one of the congressmen, who pointed out that, since Japan must be considered as virtually a partner in the German-Italian Axis, there was a danger of the United States being attacked simultaneously from both the Atlantic and Pacific Oceans, and asked whether the naval authorities believed they could defend the country against such attacks. The Chief of Naval Operations, Admiral Leahy, speaking on behalf of the authorities, replied in the negative.

In reply to a further question as to how simultaneous defense could be assured, Admiral Leahy replied that the only method was to maintain independent fleets permanently on both oceans. After an exchange of a few more questions and answers, Admiral Leahy concluded his remarks by saying that "if the United States increased its existing naval force by sixty-six per cent at an expenditure of about $3,000,000,000, he could be confident of the possibility of defending the country on both oceans at the same time." The Admiral's tone seeming to suggest the improbability of the United States ever being able to build such a navy or of the naval authorities ever asking for it, laughter broke out in the House, and even the officials of the Navy Department who were present responded with a smile to the Admiral's joke. And it was in the same vein that the incident was reported by the following morning's newspapers. None believed at that time that such a gigantic naval expansion was probable or possible.

It is conceivable, however, that, just as the plan for the so-called 8-8 fleet, authorized by the Japanese Imperial Diet in 1929, had been in preparation as early as 1907 in the Japanese Naval Staff offices, so the sixty-six per cent naval expansion plan of the United States existed even then as a blue print in the drawer of the Chief of Naval Operations. It was in September, 1938, that the details of the plan were revealed for the first time, being reported in the *United Service Review*, the British military magazine, which stated that the United States planned to build at a cost of $2,700,000,000 an Atlantic fleet to include 12 capital ships, six aircraft carriers, 17 heavy cruisers, 18 light cruisers, 77 destroyers, 36 submarines and 56 auxiliary vessels. A comparison was made in the article between the strength of the combined Pacific and Atlantic fleets upon the completion of the latter and that of the combined fleets of Japan, Germany and Italy, as follows :

Category	*U.S.*	*Japanese-German-Italian combination*	*U.S. superiority or inferiority*
Capital ships	33	31	+
Aircraft carriers	17	10	+
Heavy cruisers	35	22	+
Light cruisers	39	58	—
Destroyers	312	235	+
Submarines	126	278	—
Others	250	650	—

Although these figures may differ slightly from the actual state of affairs, they revealed a condition under which the United States single-handed could cope with the combined naval strength of the three Axis Powers. In October of the following year, Congressman Mars, who is well versed in naval affairs, issued a statement in which he declared that, in view of the fact that the British Navy would be immobilized in the North Sea and the Mediterranean in case of war, the United States must abandon its policy of depending upon Britain for the defense of the Atlantic and take steps to defend itself in that direction. This statement was soon followed by one from another member of Congress, George Bates, who, claiming that it was quite natural that the United States should desire to maintain two independent fleets on two separate oceans, said that he was making inquiries of the Navy Department concerning the necessary expenditures. Both these statements created considerable sensation at the time and, discussing the question in magazine articles around November, 1939, I recalled the circumstances of naval affairs in 1916, and speculated on the possibility of a considerable expansion of the United States Navy, even if it might not amount to an increase of sixty-six per cent. Just as in 1916 the United States naval authorities, riding on the crest of martial enthusiasm aroused by the first European War, put through the Daniels Plan for constructing in three years sixteen capital ships and more than one hundred other vessels, I thought it possible that in the similar circumstances of the second European war the projected Atlantic fleet might be brought into being.

In these circumstances then, the third Vinson Plan of January of the following year seemed to me to be on an unexpectedly small scale. It was unexpected also that Congress should cut this expansion plan down to 11 per cent. Enthusiasm for a greater navy was not yet at its peak. In June, however, the astonishing victories of the German army as well as the British retreat from Dunkirk suddenly stimulated American interest in armaments. Popular sentiment became such that extraordinary emergency appropriations for national defense which were requested by President Roosevelt were unconditionally approved one after another by Congress in the months of May and June. Seizing this opportunity, Chief of Naval Operations Stark presented a seventy per cent expansion plan in the name of the two-ocean fleet and urged its passage on Congress. The bill was approved by the House Naval Affairs Committee after only a single day's discussion, accepting the proposal to spend $4,800,000,000 in seven years.

Even in the usually critical Senate, almost no voice was raised in objection to the bill, and thus the gigantic program for constructing 201 vessels, seven capital ships, eight aircraft carriers, six heavy cruisers, 21 light cruisers, 115 destroyers, 43 submarines and one repair ship made plain sailing through both Houses. In September contracts for construction of all these ships were made with a definite promise of completion by the end of June, 1947. The sixty-six per cent expansion of the 1938 program was converted into an expansion of more than eighty per cent (the eleven per cent increase under the third Vinson Plan of April, 1940, *plus* the seventy per cent expansion). Thus the reality proved to be greater than the dream.

The foregoing paragraphs are not merely a record of the circumstances leading up to the conclusion of the naval expansion program. They reveal (1) that the program is an improvised and hastily contrived plan and (2) that it is problematic whether the program can be carried out as planned. Are building materials and equipment sufficient to meet the requirements of such a program ? Are the crews available to operate this great fleet upon its completion ? On these factors depend the big question whether the immense plan inaugurated without adequate preparations can be carried out according to schedule. The three-year plan for the construction of 16 capital ships which was commenced in 1917 was only half finished after five years. What are the prospects of the present building program ?

Very satisfactory progress in part of the program has been recorded up to the present. As an outstanding example, the destroyer *Edison* was completed in ten months and commissioned in March this year. Considering the fact that the construction of a destroyer in the United States has hitherto required at least eighteen months, and even in Japan and Britain it has required about the same length of time, and at least fifteen months in special cases, the completion of the *Edison* in ten months can be regarded as having set a new record, the record for speed being the case of a destroyer hurriedly constructed in wartime in nine months in 1919. Still the destroyers of the 1,000-ton class constructed at that time are an entirely different proposition from the 1,500-ton class destroyers of to-day. Under the new program, also, a cruiser of the *Brooklyn* class has been completed in thirty-two months, this, too, appearing to be a new record shortening the hitherto required time by eight months.

In such directions progress has been rapid. No doubt the experience of having constructed more than a hundred and twenty ships of various categories since 1934 has rendered smooth the various processes of shipbuilding. Moreover, the United States being one of the leading industrial countries of the world, if not the leading country, it is not to be expected that the United States should be behind others in the construction of warships. But can this progress be maintained in all directions ? The construction of auxiliary vessels is making very satisfactory progress. Can the same progress be expected in the case of capital ships ?

Of the capital ships, the 35,000-ton *North Carolina* was completed in April of this year, six months ahead of schedule. Her sister ship the *Washington* will be completed in July, which means that she will be completed not later than the stipulated time. Such a completion in three and a half years of a 35,000-ton capital ship equipped with nine 16-in. guns and having a speed of 30 knots is also a new record for American shipyards. It still remains to be seen, however, whether the progress of the building of similar ships, namely, the *Indiana*, the *South Dakota*, the *Massachusetts*, and the *Alabama*, and the four 45,000 tonners with ten 16-in. guns and making 35 knots to be built during the second period, will make equally satisfactory progress.

For here the question of preparedness comes in. As a matter of fact, not sufficient equipment exists at present for the manufacture of armor plate of a greater thickness than 16-in. suitable for use for capital ships, as well as for making steel ingots for the manufacture of big gun-barrels and other essential armament. These equipments are absolutely essential in the construction of capital ships, and for capital ships only, not being required for the construction of other categories of ships. And no industrial country, however advanced, can convert peacetime industry to the production of such equipment.

There is in the United States only one government factory, located in South Charleston, which can make such equipment. There are also three private concerns making similar equipment including the New York Shipbuilding Company, but all are on a much smaller scale than the government factory. It being obviously impossible to build simultaneously so many big capital ships with only these factories, one wonders whether it is possible to count upon the actual start, for the time being, of the construction for the seven big capital ships under the Stark expansion program.

The United States authorities cannot, of course, be unaware of such deficiency. The sum of $1,500,000,000 has been invested since June, 1940, for the expansion of government and private armament factories. There can be no doubt that this money has been used primarily to enlarge the equipment for the production of heavy armor plate and steel ingots for capital ships. But to complete such expansion will require at least two years even in such an industrial country as the United States. Actual production of the required equipment and materials, therefore, cannot be expected before the beginning of 1943. One of the reasons why the work on the 55,000 tonner, the *Illinois*, cannot easily be started then becomes clear.

The second defect in point of preparedness for the building of large capital ships is the shortage of gridirons. The United States has sixteen gridirons suitable for the building of capital ships up to 45,000 tons each, but they are not large enough for 55,000 tonners. For this particular purpose, dry docks measuring about 1,500-ft. in length and over 180-ft. in width must be constructed. Such construction has already been started. However, as this will require about thirty months, the building of super-Dreadnoughts cannot actually be commenced before 1944. In other words, it is necessary to spend two or three years to prepare for the construction of these monster ships.

If instead of the two-ocean fleet plan having been hastily decided upon in 1940, its first period expansion had been decided and prepared for since 1938, these various necessary equipments would have already been installed and the construction of the ships would have progressed without any hitch. But the plan was actually decided upon in haste with the consequence that a number of years will be required to make preparations. Moreover, if the assertions of some authorities are accepted at their face value that the " era of 18-in. guns " is coming, the prospect of all the projected big capital ships of the United States being finished by 1947 is very slight, indeed. It is presumable that other categories of ships including aircraft carriers will be completed as planned, but a delay of a year or two may well be expected in the completion of capital ships, the ships which really constitutes the pivotal strength of any naval battle line, and therefore the life of the projected two-ocean fleet.

The next question to be considered is one of the *personnel* essential for the operation of the two-ocean fleet. It is well known that it has been very difficult in the United States to obtain sufficient men to maintain a navy of even a million tons, and all manner of inducements to persuade men to enlist in the navy have been resorted to, as, for instance, posters in the streets, motion pictures, and persuasion through men's relatives, etc. It is also said to have been very difficult to keep these men contented after their enlistment. One can, therefore, well imagine the difficulty the United States Navy is confronted with in satisfactorily manning a gigantic two-ocean fleet of over six hundred warships.

That the fighting efficiency of warships declines without a full strength of well-qualified officers and men is self-evident. Although the degree of efficiency is not necessarily in proportion to the number of the crew, it cannot be gainsaid that, for instance, a fighting ship with a crew thirty per cent under strength will be exposed to great danger in actual battle. In looking over the annals of naval engagements we see frequently cases in which a ship would have been saved from sinking if she had only twenty more men to prevent the flooding of the ship, or in which a ship would have been able to repel surprise attacks of enemy ships if she had a reserve of some ten gunners. There are, of course, cases in which warships can satisfactorily engage in battle twenty or thirty per cent under strength, but it must be borne in mind that sometimes a deficiency of even one per cent in the required *personnel* on board proves fatal. This is why adequate trained reserves must be mobilized in emergency. Such a method has long been incorporated in the system of the United States under which the President, acting with the power conferred on him by Congress, issues orders for the mobilization of emergency *personnel*. The peacetime *personnel* is called the authorized regular enlisted strength and the emergency *personnel* the authorized strength. The law enacted in 1918 stipulated that the number of the former category be 131,485 and the latter 191,000. These figures could not be increased even by the President. It must be noted, however, that these figures do not include officers and men of hospital corps ; if these are added the total numbers of the naval *personnel* would reach 145,000 at peacetime strength and 205,000 at wartime strength.

This legislation should naturally have been amended with the increase in the number of warships and the change in the international situation, but the United States left it for twelve years without any change. Then in September, 1939, President Roosevelt proclaimed the existence of a state of emergency and thereby ordered the increase of the naval *personnel* to the wartime strength. Such a step was rather belated. It is surmised, however, that the naval authorities had to mark time as this step could not be taken so easily as one for the increase of appropriations ; the increase of *personnel* could not be effected at a snap of the fingers. While the United States Navy was being expanded steadily through the first and second Vinson Plans and world-wide competition in naval building was becoming more and more pronounced, it seems obvious, however, that the United States should have taken steps before this to increase the naval *personnel*.

At the beginning of 1941, the strength of the United States Navy in *personnel* was, according to my estimate, about 187,000, and so appeared to be fast approaching the limit of 191,000, the wartime strength which the President had been authorized by Congress to attain. At that time warships were being completed at the rate of three a month. If auxiliary vessels which were also being finished were added, the number of required *personnel* would soon exceed the statutory figure.

In these circumstances, a bill was presented in Congress in January of this year and adopted in March, increasing naval *personnel* to a peacetime strength of 232,000 men and an emergency strength of 300,000. Since by another law the Marines, a characteristically American organization, can be maintained to the strength of twenty per cent of the regular naval strength, the figure for the Marines would reach 46,400 in peacetime and 60,000 in wartime.

Will this strength suffice to man the new ships now being constructed under the enormous expansion plan? This plan is being realized at a far greater speed than the Daniels' Plan of 1917, a capital ship instead of being delayed beyond the stipulated time now being completed six months earlier than schedule. In view of this fact the increase of *personnel* must accordingly be accelerated.

The United States Navy Department must already have figured the exact number of *personnel* required. Navy Secretary Knox said some time ago that the required strength in 1947 would be 530,000 officers and men. This cannot be considered too many for a two-ocean fleet of 625 ships, and may be too few. Since all of the 138 ships which were on gridirons last year will be completed and put into commission in 1943, these ships alone will demand at once 100,000 officers and men. Calculating the required *personnel* strength in proportion to the increase in ships, the following figures are obtained:

1942-3	300,000
1943-4	410,000
1944-5	485,000
1945-6	520,000
1946-7	535,000

These figures, I believe, are not far from the truth. There is no question that the President will ask Congress for an increase of his power to enlist men for the Navy and that Congress will assent and pass legislation to assist in this. But the question is whether the enlistment of such a large number of men can be realized as it is desired. In the light of past example there must be a considerable number of people who doubt the practicability of such large enlistment. Recent record in this regard, however, does show rather a remarkable success in enlisting men for the Navy. Although I have not the exact figures at hand, the record of the past six months shows, I believe I am correct in saying, that even in an unfavorable week not less than 700 men enlisted, while in a successful week the enlisted men reached the number of 1,000.

These, of course, included many discharged from reserve who have re-enlisted, but if men enlist at this rate, a *personnel* increase of 50,000 per year will by no means be impossible.

The question next presents itself as to whether it is possible to keep up this rate of *personnel* increase. There is also a doubt as to the practical utility of new recruits after re-enlisted men are all taken in. The third point in doubt pertains to officers whose increase is not so simple as that of men. Good sailors are not made in six months or a year. It is generally admitted that it takes three years to make full-fledged sailors, although the required period of training depends on individual's duties.

When all these circumstances are carefully considered, the question reveals itself as one of world-wide importance and interest as to whether the United States Navy will be able to obtain all the officers and men it requires for the operation of the two-ocean fleet.

Various other questions concerning the two-ocean fleet remain to be considered. But the principal question is whether, upon the completion of the two-ocean fleet, the ratio of naval strengths between the United States and the three Axis Powers will be as calculated. Many of the conjectural figures appearing in the United States up to date seem to put the number of capital ships now under construction at four for Japan, two for Germany and two for Italy. Reckoning the number of similar ships being built by the United States at 17, we are able to estimate the combined strengths of the existing fleets and those under construction as follows:

Country	*Number of existing capita' ships*	*Number of capital ships under construction*	*Total number in 1947*
United States	15	17	32
Axis Powers:			
Japan	10	4	32
Germany	8	2	
Italy	6	2	

The above figures cannot be considered accurate in point of existing strength, for the so-called pocket battleships of Germany can by no means be regarded as capital ships in the proper sense of the term. Moreover, three of the ships of the *Texas* class of the United States and four of the *Cavour* class of Italy are incapable of participating in a battle on longer gun range than 30,000 yards. The first line strengths should, therefore, be reckoned as 16 for the Axis Powers and 12 for the United States. Turning to the ships under construction, it would be a mistake to suppose that the three Axis Powers will not increase their present building program to counterbalance the great building activities of the United States Navy. It is to be presumed that Germany will build at least six capital ships and Italy will no doubt build three. In the next five years, figures for Japan are unknown, but Japan also will no doubt build more than the four estimated by Secretary Knox. Personally I would estimate the total number of capital ships under construction in the three Axis countries as being not less than 16. As time goes on, say, in 1948 and 1949, the number of capital ships will be greater on the Axia side than on the United States. That is the conclusion drawn by common sense.

In such an eventuality, the United States will, we must presume, augment its expansion program in order to cope with the new naval situation. The present two-ocean fleet is, therefore, not a definitive one: it is one destined to be changed after three or four years. The inevitable consequence will be the development of a large scale naval building race unparalleled in world history and fraught with direful results.

In this outline, I have purposely omitted consideration of the British Navy, though knowing full well the absolute necessity of taking into consideration the possible fate of that navy, which it is still premature to discuss. Still, the fact that the two-ocean fleet of the United States will continue hereafter to raise various questions throughout the world is not altered by such consideration or the lack of it.

China and Her Foreign Advisers

(Continued from page 226)

American Colonies signed the Declaration of Independence and set up the first democratic government. In 1911, almost 700 years after King John, the Manchu Emperor was overthrown and the so-called Chinese Republic took its place.

Overnight a 5,000-year-old Empire which had been ruled by a succession of autocratic dynasties was proclaimed a republic, but it was impossible for the nature of the country and its people to be transformed so easily. In the western world there were evolutionary processes which took several centuries, and it is not reasonable to expect those same processes to be completed in less than a single man's life-time, no matter how accelerated the age, in China or elsewhere.

Democracy, or the quality of greatness in a country, or national unity are not things that can be imposed from the top on downward like a slip-over sweater. They are things that must come from inside, from the bottom, from the people who make up the masses. It is the common Englishman that epitomizes the courage of Britain to-day, and it is the popular American will that translates itself into President Roosevelt's courageous leadership. The same cannot be said for China where a select group from the upper crust makes policy and executes it while the masses remain passive and usually without cognizance of what is transpiring.

It is a fundamental fallacy to perpetuate this state of affairs as seems to be the case when the experts and advisers from Washington come to Chungking to assist and direct the regime in power. The root of the problem of China lies elsewhere, and it appears the Japanese and their Nanking friends have found it when they started the task of bringing security, enlightenment and the full rice bowl to the common man.

Engineering Progress in Interior China

By VAN KWEI-CHING

ONE hundred and fifty-nine power plants, large and small, are in operation in interior China. They provide light to cities and towns and power for thousands of factories in the interior provinces. It is estimated that they have a combined capacity of 61,327 kilowatts, turning out 111,931,000 units of power a year.

As compared with prewar figures in Free China provinces, there has been an all-round increase. The number of power plants has been augmented by 18, the capacity enlarged by 20.7 per cent and their total output of power by 86.8 per cent. Engines for the additional 10,000 kilowatts were removed from the war areas. Meanwhile, a new consignment of equipment capable of producing another 15,000 kilowatts is *en route* to Free China.

The distribution of these power plants is as follows: 40 in Chekiang, 27 in Szechuen, 20 in Fukien, 18 in Hunan, 14 in Kwangtung, nine in Kiangsi, three each in Yunnan, Shensi and Honan, two each in Anhwei and Kansu, and one each in Kweichow, Sikang, Ningsia and Tibet. Power plants owned and operated by individual factories are not included.

Running the newly added 18 power plants is the National Resources Commission of the Ministry of Economic Affairs. Preparations are afoot for the erection of seven more new plants in Free China. The commission has gone into co-operative arrangements with power plants in Kweichow, Hunan and Sikang. Meanwhile, it has begun to utilize hydraulic power resources in Yunnan and Szechuen. Construction on several small-scale plants in various parts of Szechuen is scheduled to be completed some time this year.

In the steady expansion of the Chinese power industry in the interior provinces several things are noteworthy. Unlike China's electrification efforts in prewar days, which were confined to coastal regions, all new plants are scattered over the vast hinterland. The second point is that all these plants have been erected not so much for lighting large cities as to feed factories with power. A third factor is that more and more attention is being paid to the development of hydraulic power because it is much cheaper.

In promoting power industry, the Ministry of Economic Affairs has gone far in helping privately owned plants. For instance, it gave a large cash subsidy to the Chungking Power Plant to enable the moving of its engines to a safer place. Then the Chengtu Power Plant through the good offices of the ministry, secured a loan from the Chinese banks sometime ago to meet a deficit.

The ministry also lends a helping hand in the importation of machines and parts needed by the power plants, in the storage of fuel and in providing other facilities. It encourages individual factories to install, wherever possible, their own power equipment.

Before the war broke out in July, 1937, there were 460 power plants with a combined capacity of 631,165 kilowatts turning out 1,724,305,000 units of power every year. Among them, however, were foreign-owned plants in the treaty ports. What Free China has to show at present compares ill with prewar figures of China as a whole. But if the comparison is narrowed down to the interior provinces, the significance of the expansion become evident.

Irrigation in Interior China

A feat similar to the construction of the famous Grand Canal is being repeated in Free China to-day. It is not a single canal and the usefulness of the new ditches does not lie in enabling grain transport to the imperial capital. Their purpose is the irrigation of acres of farmland. Spread over many parts of the interior, the channels, built and building, from an intricate system worked out by the Ministry of Economic Affairs.

In Shensi Province, some 173,000 acres are irrigated by the completed canals, which branch out from the province's main streams. Those under construction will water an additional 150,000 acres.

Among the earlier canals in Shensi is the Chinghui which draws its water from the Ching River. Completed in 1933, it irrigates 116,000 acres. In 1937, the Weihui canal was constructed. The Meihui and the Spinning Damsel canals were completed the following year. Work is proceeding to remove the quicksand which has obstructed the construction of a tunnel of the Lohui canal. Insufficient fuel supply for motors has forced the engineers to rely on manual labor and native tools, but construction is continued just the same.

In Kansu Province, the Taohui canal, completed in 1938, irrigates 4,200 acres. Two new canals nearing completion will water 10,000 acres. The survey of two new canals has been completed.

Irrigation in Szechuen has received close attention. Constructed before last November were 14 new canals, 130 reservoirs and 1,112 water ponds. With the aid of 30 pumping stations, they irrigate 74,000 acres of farmland. Under construction are five canals, 500 ponds and 20 dams, which, when completed, will irrigate additional 18,600 acres. Survey has been started of 14 more canals to water 75,000 acres.

Similar work has been undertaken in the neighboring province of Sikang.

In Kweichow, the canal completed early last year in Tingfan county, south of Kweiyang, water 1,200 acres of land. Under construction is a canal in Tuyun county, south-east of Kweiyang, expected to irrigate 1,000 acres. Construction will soon begin of a series of dams and water locks in Tingfan county.

To promote land reclamation in Kwangsi, irrigation systems are being developed in six districts in the Liuchow and Liuchen counties, central Kwangsi. In some of the districts, settlers have already begun to work. When completed, the canals will water 21,500 acres of land. Plans have been drawn up for constructing an extensive irrigation system in ten districts in the Lingchuan and Kweilin counties in northern Kwangsi to irrigate 77,000 acres.

In Yunnan, two dams to irrigate 17,600 acres in the south are under construction. In five central and western districts new canals and dams are planned to water 35,000 acres of land.

Construction has begun on two canals in Lushan county in central Honan, west of the Pinghan Railway, to irrigate 6,300 acres of land. Two further canals have been surveyed and four others are in the blueprint stage.

Under construction in Kiangsi are six reservoirs, one canal, two dykes and 21 slopes. These will solve the irrigation problem of 22,000 acres of land most of which is undeveloped.

Suiyuan's irrigation construction program, to be completed this year, will make 80,000 acres of land productive.

Dredging for Inland Navigation

Work to improve inland navigation over 9,254 kilometers of rivers in the provinces of Hupeh, Szechuen, Shensi, Kweichow, Yunnan, Hunan, Kwangsi and Sikang is partly in full swing, partly planned according to the Ministry of Economic Affairs.

In the total length, work is proceeding on 3,879 kilometers, namely, dredging, dynamiting of sand bars, building dams and wharves. Work on the remaining 5,375 kilometers is being planned and surveyed. Following the successful conclusion of a trial cruise by an engineering party last September, engineers set to work to make the Gold Sand River navigable in sections. At present, boats of less than four tons can go from Ipin as far as Manyisze. When the whole project is completed, a 820-kilometer stretch will be navigable, linking western Szechuen by water with Yunnan.

Of equal importance is the 909-kilometers course of the Chialing River from Chungking to Paishuikiang in southern Shensi, which connects with the North-west. At present, only the section from Chungking to Hochuan is navigable to steamers of less than 300 tons throughout the year, while from Hochuan to Nanchung 200-ton boats can travel during the high-water season. The navigability beyond Nanchung is limited to boats of less than five tons.

Other rivers on which hydraulic work is being carried out are listed as follows:

Rivers	*Section*	*Length Kilometers*
Wu	Peiling, Szechuen to Szenan, Kweichow	343
Chi	Kiangtsin to Kanshuichang, Szechuen	190
Min	Ipin to Chengtu, Szechuen	355
Heng	Anpien, Szechuen to Yentsin, Yunnan	175
Yenching	Tengchingkwan to Tzeliuching, Szechuen	73
Yuan	Chingyang to Changteh, Hunan	490
Chingshui	Chungankiang, Kweichow to Chinyang, Hunan	416
Hsiang	Changsha, Hunan to Hsiangan, Kwangsi	600
Kwei	Tsangwu to Hsingan, Kwangsi	348

Among the waterways under survey for navigation improvements are the 650-kilometer Ichang-Chungking and 372-kilometer Chungking-Ipin sections of the Yangtze. In the first section, steamers below 1,400 tons can navigate during the summer and those below 600 tons during the winter. From Chungking to Ipin steamers below 800 tons can navigate during the summer and those below 400 tons during the winter.

Road-Builders Triumph Over Nature

Before officially opened to traffic in June, the 525-kilometer Loshan (Kiating)—Sichang Highway, linking Szechuen and Sikang, has become a legend. The whole story of the construction is still hidden in its mountain vastness, but from time to time echoes of incredible human efforts have stirred the imagination of the outside world.

Some day the record of this piece of engineering will be complete, a record of many sacrifices in an incessant fight against nature. As one who just returned from an inspection trip put it, the very earth is drenched with the sweat and blood of 100,000 people.

Starting from Loshan, over 250 kilometers west of Chungking, the road passes by Mount Omei and goes in a southerly direction to Sichang in southern Sikang. Construction began one and a half years ago at a steady but slow pace. Not until last year was it geared to high speed upon an order of the highest authorities. The ministry of Communications then made it one of its main tasks, mobilizing all available manpower, material and financial resources.

Final survey was made in March, 1939, and by August construction was begun on the easy sections in the well populated regions. After careful preparations concerning labor, food supplies, materials and implements, the difficult sections were tackled, one after another, beginning with early 1940. It was not until the latter part of the year stone-cutters, brought from further east, commenced their work.

Aside from the terrain, the chief difficulties were the thinly populated regions traversed by the highway and the severe weather conditions, the mountains being covered either by fog or snow, the whole year round. It meant that workmen as well as their lodging, food and clothing had to be transported over long distances, causing a large increase in the construction cost. Following the establishment of a transportation department, camels, junks and all kinds of vehicles were mobilized to carry supplies and materials to the workers. The health of the men was taken care of by the National Health Administration which set up fourteen health stations and organized a number of mobile medical units.

Labor control was another serious problem which engineers and administrators solved only with much patience, tolerance and tact. The 100,000 laborers, men and women, were recruited from regions were the people had never been organized before, and where the significance of China's resistance was barely understood. Agitations occurred but those in control successfully quelled them before they could develop into violence.

One significant feature of the labor force was the participation of 10,000 Lolo tribemen. They relieved the labor shortage, which was acute in the sparsely populated sections. In the greater part of the area traversed by the road in Sikang Province, the average population density is only four persons per square kilometer. Most of the labor had therefore to be imported from Szechuen. According to the system of conscript labor, each worker was required to work for one month, after which time he was replaced by a new conscript.

Many stories are told of the heroic efforts with which seemingly insurmountable natural obstacles were overcome. On the Szechuen-Sikang border is a horse-shoe shaped chasm, 150 feet deep, called Yenwokow ("Ravine-Cliff-Canyon"). To cross it from one side to the other the stone-cutters required half a day before they could set to work on the cliffs. Perched in precarious positions, the men kept on even during high wind and sleet. Forty of them fell to death fathoms below while working on the cliffs.

While leading a group of workers over narrow paths up a steep hill, a foreman named Chiang Yueh-wan caught a severe cold. Though suffering from high fever, he continued directing the work until he succumbed. Over 2,000 workers lost their lives.

Toward the end of January, 1941, the road was at last open. By the end of this month surfacing will be finished, enabling regular traffic.

On a trial trip, a motor-car and two trucks covered the entire distance in 36 hours and 40 minutes, an average of 14.3 kilometers an hour. It is hoped that in regular traffic motor-cars will make the trip in two, trucks in three days.

Costing approximately $70,000,000, the road is one of several important highways linking Szechuen with the outside world. The others are the Szechuen-Yunnan, Szechuen-Hunan, Szechuen-Shensi, Szechuen-Kweichow and the newly completed Chengtu Kangting roads. However, the Loshan-Sichang highway surpasses all of them in difficulty of construction. With the exception of two stretches of fairly level terrain between Loshan and Omei and Tachao and Sichang, totalling about 130 kilometers, the road cuts through sheer cliffs, crosses deep chasms and rapid currents and winds through dark valleys.

The Lo-Si Highway has made some records in road construction. The earth work of the Burma Road covered 45,000,000 square meters. Although that of the Lo-Si Road is but one-fourth of this figure, topography made construction more difficult. The highest point of the Burma Road is 2,600 meters above sea level, and the lowest, 700 meters, a difference of 1,900 meters. The difference between the highest and lowest level of the Lo-Si Highway is 2,400 meters, the largest found in any highway in China. The highest point of the Lo-Si Road is 2,835 meters above sea level, another record for Chinese highways.

Compared to the Burma Road, the highway, however, is more level. The average grade of the entire road is ten per cent. The highway is only four and a half meters wide in its straight sections but considerably wider at the curves. Sidings are provided at regular intervals.

The importance of the highway is not limited to the promotion of communications between Szechuen and Sikang. More important still is the part it will play in the opening of another international trade route. Besides, the road will put immense quantities of natural resources within reach. Chinese herbs, forests, raw materials essential in the manufacture of munitions and mineral resources are reported to abound in the regions which the road traverses.

North-west Engineering College to Expand

Two new departments will be added to the National Engineering College in the fall of 1941, according to Mr. Lai Lien, President of the college. Mr. Lai received his mechanical engineering training in America and is a member of the Chinese Engineers' Association.

More than 1,000 students, with about 30 girls, are preparing themselves as engineers and scientists in the college under the guidance of 100 faculty members. The college has at present eight departments—mechanical, electrical, aeronautical, civil, hydraulic, chemical, spinning and weaving, and mining and metallurgy engineering. A post-graduate division on mining and metallurgy provides research facilities. The electrical engineering department has sections of telecommunications and electric power.

The new departments to be added this fall are industrial management and structural engineering. A special section on locomotive engineering will be added to the department of mechanical engineering, and another on railroad construction to the civil engineering department.

The college graduated 500 engineers in the last two years. All are placed in key positions in the national reconstruction program, according to Mr. Lai. In fact, the graduates have no employment worries; on their graduation day each averages eight or nine offers, and it is for them to pick and choose.

Considered by experts as the best engineering college in the interior provinces of China, the North-west Engineering College has as its predecessors four famous engineering colleges—the Colleges

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What A Hundred Years Hath Wrought

Can the Nipponese Succeed in Asia Where the White Man Has Failed ?

By W. H. BROOK

Just one year less than a century ago, on August 29, 1842, the Convention of Nanking was signed ending the Opium War between Britain and China. The Empire of China's bitterly guarded isolationism was no more. It opened the vast, wealthy and now practically helpless realm to foreign trade and subsequently foreign exploitation after several centuries of desultory and often dangerous commerce with European nations. It also started a chain of most interesting and significant events.

That chain is not yet completed, but the links are being forged to-day at a new accelerated pace under the pressure of two great wars. The significance of the latest links have manifested themselves in a variety of ways . . . .

Last night an Old China Hand dropped in, as usual, to his club. Veteran of more than a third of a century in this country, he might have been any of hundreds of Westerners who have spent more time in China than in their native lands. His club might have been any of a dozen sumptious establishments in China's main Treaty Ports. As he sipped his whiskey and soda with an old crony or two he observed reflectively : "No, things are not what they used to be."

No, things definitely are not what they used to be in the Far East. The Old China Hand's observation was made from his own personal viewpoint—his business, his comforts, his daily life, his associates, privileges, ambitions and aspirations. In a larger sense, although he himself probably did not see it as such, those words described the shape of the newest links in the chain of events that were started a century ago.

The course of Asia's development has been described in a number of ways : China's Reawakening, East Asia's Rise, Development of the Far East, Asia Awakens, Japan's Progress. It has manifested itself with a revolutionary force in wars, incidents, violence, mob attacks and nation-wide boycotts. It has also been manifested in the gentle ways of compromise that the Far East perfected.

At the time of the Convention of Nanking the East knew next to nothing of the ways of the West. Japan, the nation that was to take the leadership in the Orient was still a hermit country where intercourse with foreigners was forbidden. The smaller kingdoms and sultanates of Southern Asia had no comprehension of the outside world ; they lived in blissful ignorance of progress except for isolated contacts with Portuguese, Spanish, Dutch and British traders and missionaries.

Now, the countries of the Far East have been filled with a rush full of national consciousness. With the wholesale adoption of Western ways they have learned of the world's wonders, and of the part they play in its development. They have learned of evil and avarice and they are out to make up for lost time. They see about them the practicality of the philosophy that the best things come to him who is strong.

Unfortunately, but perhaps inevitably, the resurgence of nationalism through the Far East has been along racial as well as national lines, the Yellow and Brown men against the White. The seed for this was laid long ago when the very white men that first reached the Orient laid special emphasis on the superiority of their race and firmly established a rigid color line. It does no good to recall the manner in which the color bar was flaunted except that it emphasizes the reason the re-awakened peoples of the Far East are so conscious of its past existence.

Back to Beginnings

In China, for instance, an alien invader came to exploit the land. He took advantage of cheap labor and made no effort to improve conditions. Under extraterritorial privilege he was not accountable to Chinese law. He drew a handsome salary, lived like a petty potentate surrounded by a retinue of native servants and refused to accept the local aristocracy as his social equals. He built fine hotels, clubs and parks and refused to admit the native residents on purely racial grounds. He erected signboards offensive to Oriental susceptibilities, such as those that in past days adorned entrances to public parks in Shanghai, which contained a line reading "Chinese Not Admitted" and another line at the bottom of the sign reading, "No dogs allowed." The white alien's snobbishness was something that the friendly, gregarious Chinese could never understand except in terms of caste.

These are the seeds that are bearing fruit to-day.

Three years ago I had a conversation with a young Chinese in Hongkong which I still remember vividly. He was only a chance acquaintance, and I learned he had never been out of China and had learned his English in a Y.M.C.A. school. Through some now unremembered circumstance the then still young Sino-Japanese hostilities were brought up, and that started a torrent of bitter oratory.

The Oriental people are being fools, he declared over and over again. "We Yellow people must not fight, we must unite against those who oppress us. We have been exploited and bled dry, and civil war among the Orientals only tightens the grip Western nations have over us," he said vehemently. This youth was no Communist as he no doubt would have been termed by Hongkong officials. He was merely feeling the new nationalism that has been felt throughout the entire Far East.

The hopes of that young Chinese for a quick Sino-Japanese rapprochement and Oriental unity in throwing off Western influence have been blasted by many months of unremitting warfare. To-day the peoples of the Far East are far from uniting to throw off any "foreign yokes." One suspects that the opportunity was beckoning for Japan to assume leadership of the entire Far East, but it has been badly handled. Instead of a united effort there are individual regional awakenings that have failed to become integrated. Nevertheless, "things are not what they used to be."

The old order of privilege is fast on its way out. Both the United States and Britain have voluntarily declared themselves willing to end extraterritoriality in China. A decade and a half ago they had flatly turned down Chinese proposals that conferences be held to discuss means of ending extraterritoriality. A Caucasian face is no longer a passport, a mark of superiority or the insignia of privilege. In the streets of the Far East natives no longer make way for the foreigner—they all walk on the sidewalk.

The Westerners who first came to the Orient built their world on superiority. They awed the natives with their big guns and showed them their strength with steam boats, locomotives, modern engineering methods. They introduced such wonderful devices as the telephone and telegraph, and later the radio and airplane. The Westerner had plenty of material evidence to demonstrate his superiority, and it took only general precautions to perpetuate that impression.

All Westerners stuck clannishly together. It was a standing rule not to let a native get the best of one among them. Strict rules of social conduct were drawn up and most of the association between foreigners and natives was on a master-servant basis. It was imperative to the scheme of things that this united front of White faces against the pigmented ones be kept inviolate.

How Changes Set In

But as time passed that united front began to crumble. Just before the turn of the century the Japanese demonstrated that they had absorbed the lesson of Western military might sufficiently to defeat China. In 1904 the Japanese sent an electric shock through the whole Far East by daring to tackle a mighty European power in war, and when she emerged victorious against Russia it was the first sign of the breaking down of the Westerners' power in the Orient.

The World War clinched matters when the European nations which had been so careful to keep their united front went to war among themselves. The startled Chinese saw the Germans defeated and imprisoned by other Europeans, just as they themselves had been treated after the Boxer War and numerous other smaller incidents. By now it was no novelty to see Westerners humbled, for the Japanese had done that to the Russians.

After the Russian Revolution there began a great migration of White Russians into the Far East. Now the Orientals saw white men begging for food, sleeping in the streets, setting up homes in straw matsheds just as they did, working as coolies for coolie wages. They saw white men dirty, ragged and bereft of pride in that vast movement of Russians fleeing from the Revolutionists and now the united front was irrepairably shattered.

After the Russians came the Jews, driven from Germany, Austria and Czechoslovakia by Hitler's pogroms. These were not the rich Jews who played a leading part in Shanghai's financial and real estate world; they were penniless refugees who settled in squalid camps in the city's outskirts by grace of the Japanese military. Once more the Orientals beheld the sight of Europeans humbling themselves for a crust of bread.

The process was carried a step further in the recent border war between French Indo-China and Thailand. The Thais were making slow but steady progress against the French forces, the bulk of which were men of the French Foreign Legion since native troops could not be relied upon. Japanese entry into the Hanoi area only a few weeks before in the face of French opposition had made a deep impression on the Indo-Chinese, and they had begun to get ideas. Now the Thais were winning, and they had Legionnaires locked up in a prison camp in the middle of Bangkok as proof. Somehow they couldn't quite get over the fact that they had seized, defeated and imprisoned Europeans in battle, and the countryfolk flocked into the capital from miles around to peer at the captives as if they were some strange new type of animal. To top it all it was Japan that mediated the dispute, one party of which was a European colony.

The people of the Far East are just beginning to get over the idea firmly implanted in them for several generations that the white man is a superior individual. This process has shown the greatest advance in Japan where for decades the government has been treated as an equal by foreign powers and where technical and material progress has won for it rank of a major power. It is most retarded in the backward regions where the administration is still weak and system of economy still primitive. Yet even in Shanghai to-day I have heard upper class Chinese say with genuine compassion that they felt sorry for Russian and German refugees forced to begging or menial labor because these Chinese had grown up to expect whites to be superior individuals while they revealed little concern for the grimy, disfigured beggars of their own race that haunt the streets.

New Vistas Opened

Thus with their respect and awe of the Westerner crumbling before his revelations of his own frailties, the Oriental gained a new confidence in himself and felt the twinges of a new national and racial pride. What could be more natural than to look to the most progressive of Far Eastern countries for the leadership they wanted but did not find in the Western nations ?

To-day, in various parts of the Far East under Japanese influence the youths are earnestly studying things Japanese. One sees this in the free night language schools in Shanghai, among Chinese office boys and junior clerks who get instruction in their spare moments from the Japanese girl typists. One sees the results in the earnest conversations going on half in Chinese, half in Japanese, in the hotel lobbies and restaurants of Dairen, Mukden, Hsinking, Peking between Japanese and Chinese businessmen, and in the growing number of young students from the continent going to study in Japanese colleges and universities, resuming a trend that was broken by the Sino-Japanese war.

These are evidences that the people of the Far East have begun to realize as never before that this is a materialistic world and that they must look to Japan for leadership in the work of building up a great, undeveloped region lagging some 50 years behind the United States and other advanced nations in material achievements. If progress is measured in terms of steel and concrete, Japan has shown her ability and willingness to assume leadership in Asia, and it is only natural that Asiatics turn to an Asiatic nation.

If the foundations laid in the earlier years of Oriental exploitation had taken a different shape, the Far East of to-day might be well on its way to material and political progress hand in hand with Western nations. Instead there were only limited instances of co-operation until now an immoderate Japanese policy has forced the Chungking regime, once virulently anti-foreign, to lean more and more to foreign support.

Japan's claim to Asiatic leadership is well founded. The Western powers had their chance and the product of their handiwork is not a flattering one. The Japanese know that the peoples of the Far East have looked to them for leadership, but the tragedy is that she has not proven equal to the trust placed on her. She learned to build railroads, put in blast furnaces, introduce modern hygiene and eradicate disease, but she has failed, it appears, to profit by the mistake of the Westerners. Her desire to lead has begun to be adulterated by the same hunger for power and gain that despoiled the efforts of her predecessors in the rôle, and this repetition of the selfishness of foreign exploiters is doing more than anything else to alienate the Oriental nations from Japanese policy.

As the newest links to the Far East's chain of events are being forged, the peoples here will watch with great anticipation for two things. Will the Western nations having learned their lesson change their ways, and will Great Britain and the United States, now that they have regained the good will and confidence of a good portion of the Far East, continue their effort to aid instead of exploit this area after the emergencies facing them have vanished ? Or will Japan realizing her error and awakening to the part that she is so naturally suited to play, recast her policy so as to benefit the whole area instead of merely herself and win back the confidence of her neighbors ?

Japanese planners of a Far Eastern economic bloc so ineptly described as the New Order and her Greater East Asia Co-Prosperity Sphere have found difficult going between the ideal and execution. She has done much to arouse apprehension and distrust as to the altruism of her aims. But so deep-seated is the Orient's desire to go its own way that Japan's plans are far from frustration. There is still room and time for their execution if the proper concern for the various regional interests is exhibited.

The magnitude of the work of modernizing the Far East is large enough for all interests to have their share, it is true, and as a consequence of the European war the chief exploiters of the Far East are likely to recast their policies into much more liberal molds. Then, there is the possibility of joint guidance and leadership between Western and Eastern countries for the betterment of this area. Yet there is reason to believe that the task of rehabilitation and reconstruction after the present wars will be so great that no nation will have the energy to spare for work outside of its own geographical sphere, and the immediate task in the Far East will be led by Japan if she makes herself worthy of the honor.

Engineering Progress in Interior China

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of Engineering of the National Peiping and the National Northeastern Universities, the Peiyang Engineering College formerly in Tientsin and, the Chiaotso Engineering College established by the Chingsing Mining Administration. The Peiping and Peiyang colleges, which left Peiping and Tientsin in July, 1937, when the Japanese came in, were incorporated into the College of Engineering of the National North-west Union University. The college was made independent in July, 1938, when the Northeastern and Chiaotso institutions were added to the institution. The incorporation of the Chiaotso school gave the college a reasonable stock of equipment and apparatus, as the other three institutions had lost nearly all their equipment in the two northern cities.

The college is situated in a village some 15 kilometers from Chengku, southern Shensi's new educational center. Housed in a Italian Catholic church leased by the school.

The South Seas

By MARC T. GREENE

At last I have learned, through various correspondents and through Sydney, just what has been happening in the South Seas, especially in the French possessions, since the collapse of France. It certainly makes an interesting story, which I shall now relate. But first it is perhaps in order to define the various South Sea possessions of France and England.

France owns what is called the Etablissements Francais de l'Oceanie, also the big nickel-producing island of New Caledonia, half of the curiously-governed "Condominium" of the New Hebrides, and several scattered islands westerly from Samoa the principal of which are Wallis and Fotuna. The E. F. de l'O, includes the Society group (Tahiti), the vast Puamotu archipelago of coral atolls, the Marquesas, the Gambiers, the Australs and many scattered isles and atolls. New Caledonia is a colony by itself and its governor-general is the ranking French official in the South Pacific.

The "Condominium" is a joint British-French rule of the big New Hebrides group whose people are mainly Melanesian and which is still little known in the interior. For a variety of reasons this joint rule has never worked satisfactorily, so much the contrary, in fact, that throughout the South Seas it is unvaryingly referred to as the "Pandemonium."

Britain's possessions are even more extensive. The center in the Fijis, whose governor-general is also known as British High Commissioner for the Western Pacific, and exercises authority over everything British except the colonies and mandates administered by New Zealand and Australia. These include the New Zealand colony of the Cook Islands (southern and northern groups) and the mandate of Western Sampa, which takes in all the Sampan archipelago but the American naval station of Tutuila (Pago Pago.) The southern Cook group is Rarotonga and neighboring islands, the northern consists of a number of islands more than 1,000 miles north, including Penrhyn, Manahiki, Rakahanga and Palmerston, all considerably inhabited and with white resident agents.

Australian possessions are the colony of Papua and the mandate of New Guinea, the latter including many adjacent islands and groups. Australia also owns Norfolk Island, former notorious convict-station and later home of some of the descendants of the "Bounty" mutineers, and Lord Howe Island.

The Fijis are a Crown Colony. The British also possess the Gilberts, the Ellice and Solomon archipelagoes, the Tongan group, all "protectorates," and numerous others.

All these islands and archipelagoes are scattered across a sweep of ocean a good deal larger in extent than the United States, so it is not much wonder that the German raiders are able to escape detection in it. No one has ever counted the islands but there are thousands, with many more uninhabited than not. These also can provide hiding-places upon occasion.

Now when French threw in the sponge, the people of all the South Sea islands were excited and disturbed. The British awaited the next move with apprehension but the French were even more bewildered. What was going to happen to them? Where did they stand now, politically speaking?

The Governor of New Caledonia, M. Maurice Pellicier of Tahiti, M. Lucien Gery and of the French part of the New Hebrides, M. Henri Sautot, received instructions from Marshal Petain to carry on as part of the Vichy regime.

This may not have been wholly to their liking but no other course appeared open. However, it was even less to the liking of most of the Europeans in all three colonies, and the leaders among the European populace got together to consider ways of opening other courses.

M. Pellicier, having no desire for conflict of any kind, resigned, and Vichy appointed Colonel Denis, commander of the Noumea garrison, to the post. Pellicier got ready to hop a plane for elsewhere but just before he hopped the British High Commissioner for Suva, Sir Harry Luke appeared at Noumea. The British administrator of the English part of the New Hebrides was with him.

These two apparently "reasoned" with Colonel Denis with some success, for the French cruiser *Dumont d'Urville*, usually stationed at Papeete and which had appeared at Noumea, was sent away. Her commander was violently anti-De Gaulle and had made threatening demonstrations. However, he obeyed Colonel Denis' instructions only to the extent of going out and anchoring a few miles off the town.

The people of New Caledonia, several thousand of whom are Europeans, now got extremely restive. Colonel Denis tried to calm them by explaining that he had had word from Vichy that a high official, one M. Brunet, who had once been ranking Frenchman in the South Seas, was on his way out to the Pacific "to explain the position."

Nevertheless, the people formed a pro-De Gaulle committee and demanded a referendum. Colonel Denis and his colleagues, all pro-Vichy, angrily refused this. He also issued a decree that henceforth all New Caledonia products would be sold to Japan. The real source of such an order was obvious to everybody, and the people began to arm themselves and form military organizations. Meanwhile, nobody would accept the currency of the Banque l'Indo Chine and no vessel appeared from anywhere. Denis closed the radio station and would permit no news whatever to be sent or received. All sorts of rumors began, therefore, to circulate in Sydney.

Meanwhile a small French steamer, the *Notou*, had left Noumea for Australia. She had no board an official, M. Paul Vois, who carried important documents relating to the nickel and chrome industries in New Caledonia and expected to make some arrangement with Australian interests to carry on these industries independent of the Japanese. But the *Notou* disappeared and no one has yet discovered what happened to her, or whether she was captured by a German raider.

New Caledonia now seemed to be in for a bad time. Farmers from all over the big island came pouring toward Noumea and all were armed. They were solidly pro-De Gaulle, and it was even rumored that the sailors on the cruiser *Dumont d'Urville*, which lay a few miles outside the harbor, had mutinied on their pro-Petain officers.

The people had learned from the visit to Noumea of Sir Harry Luke, British High Commissioner for the Western Pacific station at Suva, that the Governor of the French part of the New Hebrides Condominium was definitely pro-De Gaulle, so a small cutter sneaked out of Noumea to go and get him in order that he might come to New Caledonia and lead the anti-Petainers.

Colonel Denis, the pro-Vichy Governor pro-tem, now began to barricade the city against the rising countryside. He declared martial law, threatened military punishment and finally brought the *Dumont d'Urville* which carries two six-inch guns, alongside the quay.

The pro-De Gaulle revolt was now led by an elderly one-armed countryman, a hitherto obscure planter named Francois Pere. He was arrested by Colonel Denis and put on board the gunboat whereupon a mob tried to board her to recapture him. The commander of the boat, who bore the classic name of Toussaint de Quievrecourt had once been Governor of Reunion Island, in the Southern Indian Ocean, and was known as a French royalist. He now threatened to shoot the whole of Noumea off the map "unless the canaille returned to their kennels."

When this piquant message was carried to the people they were aroused to the fighting point. Colonel Denis appointed a patrol, making the great mistake of composing it of sailors from the gunboat and native New Caledonia soldiers (Tirailleurs de Pacifique). Rioting immediately commenced and with sticks, stones and other non-military weapons the crowd drove the patrol back on the gunboat. Her commander threatened to fire on the mob but at that the native soldiers abandoned the patrol and took their stand with the people. Denis, however, dissuaded the royalist captain.

The next morning Sautot arrived from Port Vila, New Hebrides, on a Norwegian freighter that had chanced to be there. Though Denis had at first threatened to arrest him as a "traitor to France" he thought better of it, so M. Sautot landed and marched to Government House at the head of a great mob singing the "Marseillaise." Presently he appeared on a balcony, announced that Denis had

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Pioneering in Manchuria

By T. O'NEILL-LANE

(Contemporary Manchuria)

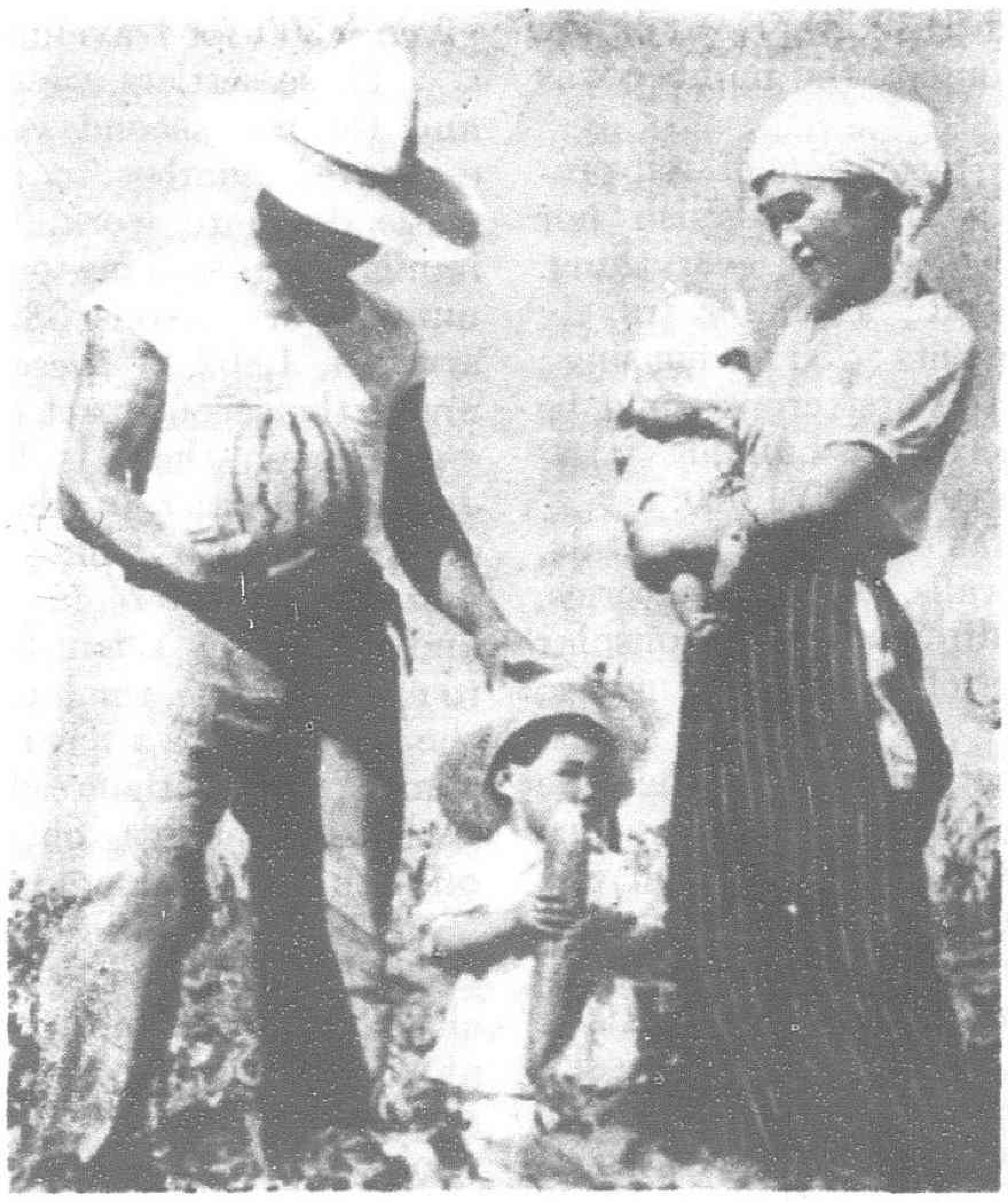
THROUGH the era of world imperialism and international land grabbing for the building of vast empires little Japan sat back with the cloak of her isolationism drawn closely about her, *sublimely uninterested in and unconscious* of the hurry and scurry for additions to territory. Peaceful penetration, not entirely innocent of ulterior motives, by the United States, the Netherlands, Britain and Spain, backed by the genius of the late Emperor Meiji, brought about prodigious changes. Japan unfastened her cloak, to let the sharp winds of international knowledge blow about her, then to realize that, in her desire for seclusion, all the finest "free" land of the world had been abstracted.

She was the newcomer to the group of nations but, unlike most of them she had her tiny homeland only which was not a particularly fertile one, while even at that time there were ample mouths to fill from what was to be got. Then when she burgeoned forth into a first-class nation she began to look around to see where and how she could add something to her possessions. Alas, it was too late. There was nothing left!

But Providence, perhaps in compensation for the scurvy manner in which Nippon had been treated, pointed the way. To trace this, however, it is necessary to go back eight years when the immediate but not actual cause for this occurred.

For many years the blackguard rule of the war-lord Changs had been responsible for the sabotage of numerous of Japan's interests in Manchuria and the future outlook was bleak. Thus when a section of the track of the South Manchuria Railway line, just outside Mukden, was blown up by the Chinese on the night of September 18, 1931, it was the last straw. Fighting broke out between the Japanese and Chinese soldiers, Japan emerging entirely successful from this clash.

The explosion brought about a series of occurrences which eventually placed Nippon in control of a huge terrain, on which nowadays almost forty million people live happy lives under her beneficent direction.



Japanese Immigrants in Manchuria

Japan is a small country with land which is anything but eminently arable. There are far too many people, in ordinary times who wish to farm (being generically fit for nothing else) and the farms are diminutive enough to induce laughter in people seeing them for the first time. The Japanese are a fecund race and every year of late is bringing a million more people to the country—one overburdened with people for decades.

Manchoukuo is a country which is as rich in land as Japan is poor and which has lashings and lashings of space for more people. A high percentage of the land is capable of being cultivated. It is one of the richest of all nations in natural resources. The lack of sufficient inhabitants has, among other things, always militated against its development. An increase in the number of farmers will be needed for many long years to come.

Could there be a more perfect complement for Japan than Manchoukuo? And there was the opportunity for Nippon to do what she had been craving ever since she became internationally conscious. There—made to order—was the land for colonizing!

There was never any question as to whether Japan would or would not. With the terrific increase in her population every year it was either expand or explode and she had no leanings toward the latter alternative.

There were, though, many obstacles ahead. Japan had had practically no experience in this field. The climate there is warm, humid, enervating. That in Manchoukuo, where Japan chose to *colonize in the north and north-east, is dry, hot in the summer* and bitterly cold in the winter months, which are many. The settlers would have to live on what they could produce themselves. They would, more or less, have to live the life of the native, to accustom themselves to increased labor, to battle against the diseases which beset the Japanese when they come to Manchoukuo, to learn to eat different and less palatable food. Vastly interested in and intrigued by all forms of culture, discoverable even in the lowest classes, they would be going to a land where they would be cut off from the source of all such intellectual fare. They would be in a desert of crass ignorance. Could the Japanese colonist meet all these unpropitious factors and still win through?

To begin with, the Japanese government had its doubts. As far back as the Russo-Japanese War of 1904-1905, Nippon had believed that Manchuria could be colonized. But twenty-five years after the conclusion of the struggle, 240,000 Japanese, colonists and others had made their home there only. In that period three attempts had been made to settle Japanese in this country, but though 566 families were brought over no more than 94 took root at that time.

The blame for this must not be placed entirely upon the settlers. Neither would it be fair to censure the Tokyo government for the lack of success. Pioneering in Manchuria in those days was a matter of deadening toil, a stone wall of hindrance and interference which had to be surmounted and an undertaking where life was, to say the least, precarious. One of the greatest snags was that it was practically impossible for the Japanese to own land under the Chinese laws then in existence.

The plans as prepared in Japan lacked much of what has been found vitally necessary to-day. There were no comprehensive attempts to select persons who would be most likely to battle with the tough problems of pioneering and come out successful. Thus it is not to be wondered at that many of those sent out as colonists were not blessed with that quality, without which failure is inevitable.

There were then no methods of taking charge of settlers when they arrived, giving them a helping hand when needed and seeing to it that they had all that they wanted to become able and worthwhile assets to the country. On the spiritual side, little was done to welcome them and give them the right spirit to go out and conquer the difficulties they were sure to meet—which were numerous.

Japan was starting off at something completely new and did not "know the ropes." The settlers were largely short weight through no fault of their own. The result is self-evident.

On the birth of Manchoukuo and the decision to make the new State a testing ground for colonies, the authorities in Tokyo discarded absolutely the haphazard and slipshod methods of those who had tried before, and went into the thing with everything they had, using the errors their predecessors had made as stepping stones to success.

They sent out investigators, carefully chosen, to study the possibilities of sending large batches of settlers to Manchoukuo. These inquirers into colonizing possibilities were given *carte* *blanche* in the new land as long as they came back laden with knowledge on what the government wished to carry out. The reports were to be based on facts and if the project was not possible, that was unfortunate. But . . . the government wanted the truth.

These scrutineers of conditions in Manchoukuo did their work wisely and well. They accepted nothing at face value. No detail was left untouched. Therefore they had highly valuable material at their command when they went back to Tokyo.

The Japanese authorities were enlightened upon many things. The investigators gave the general background, but they also covered many special requirements. The most important of these was that the immigrants would have to arrive in numbers sufficient to meet the murderous forays of bandits as the situation of the land selected for the experiment was off the beaten track, and in those days the number of outlaws battening on the land was between 200,000 and 300,000.

The Colonial Ministry mulled over the information it had received on Manchoukuo, particularly as to the number to be sent, the monetary assistance that would have to be given, the kind of persons to be chosen, etc., etc. After much putting together of shrewd heads the following decision was reached :

The land to be portioned out to the settlers must be enough to support a whole family ; adequate financial grants would have to be made ; some kind of training before embarking for Manchoukuo and again after reaching there would have to be given ; only those of robust physique, preferably with a knowledge of farming in all its different branches would be accepted.

It was then agreed that 100,000 families should be sent over to Manchoukuo in the ten years following 1932, the year when all this was planned. Later, on second thought, the number was appreciably lowered.

The government's scheme was for the formation of self-protective villages. The grant of money was neither lavish nor parsimonious. With care it was quite adequate for everything. Each farmer got Y20 for the training period ; Y200 for travel ; 75 for domestic animals ; 150 for farm implements ; 250 for housing ; 30 for clothing ; 85 for living expenses till the first crops could be harvested ; 100 for farm house and other necessary buildings ; 150 assistance for the first cultivation period ; a total of Y1,060.

In addition to all this the government was to provide hospitals, barracks, bath-houses, wells, defensive walls, shops, factories, schools, farm experts, police and defense directors with consular policemen for some time after the formation of the village, nurses, physicians, veterinarians.

At the beginning common management was to be the rule with each colonist being later given from 15 to 20 *cho* of land. One *cho* is equal to 2.45 acres. Thus almost 1,000,000 *cho* of land was purchased for the colonists in Sankiang and Pinkiang Provinces.

With all preparations complete the first ripple of " mass immigration " rolled gently into Manchoukuo from October, 1932. The arrivals settled down at Yungfengchen, now known as Iyasaka Village, near Chiamussu to the number of 493. The second ripple of 494 followed the first in July, 1933. This group was located at Hunanying, at present called Chifuri Village, to the south of Iyasaka. The third—a smaller movement than the other two, of 298 persons, formed their colony at Peitakou, known nowadays as Mizuho Village. This spot is north of Harbin and they reached their destination in October, 1934.

Then a larger body swept in, numbering 500, arriving in March and April, 1936. These were settled at Chengtzuho and Hataho, 310 at the former and 190 at the latter, both south of Mishan in Eastern Manchoukuo. The fifth, a real wave of 1,000 people, came breaking in between February and March, 1937. These entered colonies at Yungantun, Chaoyangtun, Heitai and Heitai-Shinano.

The life of these pioneers was far from a bed of roses. Not only had they natural obstacles, enough to make any but the most stout-hearted falter, which had to be met, but there were worse things unfortunately ahead of them. Chifuri Village is in the Ilan Prefecture and the name " Ilan " has in Manchoukuo a certain dread significance, for, shortly after the second batch of colonists arrived, a horde of fiendish and bloodthirsty bandits swooped down on the two settlements and by the time they had finished their foul work, the crops were no more, houses and barns had been razed and many of the settlers who were absolutely unready for such an attack had been murdered in cold blood. This horrible affair is known as the " Ilan Affair " or the " Tulungshan Raid."

This was an initiation terrible enough to have prematurely ended Japan's attempts at colonization in Manchoukuo but the Japanese are made of stern stuff. They have immense pride in themselves and they delight in performing tasks that appear impossible to others. They had no intention of leaving. They had come to Manchoukuo to be colonists and colonists they were going to be hell or high water ! Bandits or no bandits they were there to stay. And stay they did !

But every atom of courage, resolution and self-reliance they had was needed two years later when the raging floods stormed over the land where they were battling so gallantly with inflexible nature—to wipe out in a few days the result of almost a year's unwavering toil.

Again the Japanese refused to budge. They stuck undeviatingly to their guns. This was in fact literally true for they took measures to be thoroughly ready for any further attacks by the brigand element, when starting off again, undismayed, upon their assault on this harsh and rugged land.

What might be called a tidal wave of Japanese colonists latterly has been tearing towards this country. It calls for the arrival of a million families or five million persons over a twenty-year period. These settlers are divided into two groups, those receiving direct governmental assistance and protection and those being aided by private organizations or relying on their own resources with slight financial help from the Ministry. These, respectively are known as mass immigrants and free immigrants. Another name for the latter is volunteers. The former get Y1,000 expenses to start them off in their new endeavor while the latter are given Y300 for travelling expenses and the land itself.

These settlers are coming into Manchoukuo in regular billows and for the second year of the plan, 1938, 80 per cent of the estimated number to be dispatched arrived at their colonies to settle down to work. The number of settlements for this mass immigration scheme on January 1, 1939, was 157 and the total number of persons 38,419. This was apart from the volunteer arrivals, 1,802 of these having made their home in Manchoukuo under the second part of the scheme.

Though there is heavy labor attached to the life of the Japanese settler in Manchoukuo, they have little in hardship as compared with what the early colonists had to suffer. These first pioneers were in a way the germs in the agar-agar culture, and what was scientifically discovered from them has been put to excellent use, the later arrivals reaping the benefit. Even before the large groups appear in these times, there has been an " advance guard " before them which sinks artesian wells, sets up buildings, such as dwellings, outhouses, barns, storehouses, etc., and starts off with a little ploughing, to give them a flying start.

The life of these colonists needs great grit and stamina, however, if they are to be successful. There is no punching of a time-clock as they stroll in to work in the morning to leave punctually at a certain hour each evening. As soon as it is light enough to begin toil they are at it with vigor. The day is hardly long enough for them to complete everything they wish as all inside the house and around has to be done by themselves as well as the work in the fields.

Perhaps they drag weary feet to their homes when the light has failed, but that is by no means the end of the day when they can sit back comfortably, puff at their pipes and ruminate. Maybe there is something out of wood to be made, some addition to the house or the outhouses which has to be laboriously constructed. Some hours are then put in on these chores before they can stumble off to bed to sleep the sleep of the tired, though physically fit and satisfied husbandmen.

And the women do their share in right good part. They have the care of the house, the cooking and washing for their husbands and families, the cleaning—and this must be perfect as the Japanese are the most meticulous of all races in cleanliness—the mending and the darning and all else that accompanies keeping house in a proper manner.

This is not all, though. Whenever they are needed outside they lend a goodly hand with the sowing, reaping or whatever is required of them. It is this pooling of strength as much as anything else that has enabled the Japanese to come out on top in their dour fight to make a living in their strange land.

The government has arranged that the villages are complete in every respect. They have their own local government. Thi is under their leader from Japan who is the village master. H holds undisputed sway over the whole of the residents in the hamlet. The farm expert ranks next in precedence. After these are the veterinarian and the doctor in the order mentioned.

The Japanese are a painstakingly statistical race and they love to garner information, study it for lengthy periods, analyse it, tabulate it and then pass it on for use. In this way all sorts of knowledge has been assembled and disseminated among the colonists. To show what a wide area this covers, a few of the pieces of advice are quoted below as follows :

Kaoliang is at first unpalatable to the Japanese but it is rich in vitamins and is considerably more nourishing than rice. It is absolutely the finest cereal that can be obtained in Manchoukuo.

The *pechika* (Russian stove) gives out the best heat.

Less than one-fourth of the well water in Manchoukuo is fit to be drunk and care should be taken not to use any water that has not been pronounced good.

Dark brick or timber forms the best material for building dwelling houses. Red brick and cement are not recommended. The ideal roof is of corrugated iron, sod and kaoliang stalks. The roof should be low and curved.

One-storeyed houses of Russian style, with wind-revolved ventilators are the finest of all.

When no raw vegetables can be obtained, preserved ones should always be used.

Such words of advice may sound piffling to the foreigner but they were only arrived at through trial and error by the early colonists who were prepared to start a new life in a different and vastly less urbane climate than they were accustomed to so that the drastic need for more land could be met.

That introduces a point of tremendous interest. The average area for the Japanese farmer in his own country is .88 of an acre—the smallest quota in the world for agriculturists. For example it is only one-sixth of the figure for France and that is a tight little country if ever there was one. It is only one-thirtieth of the average for the farmer in the United States.

The land needed for the great inrush of Japanese to Manchoukuo—5,000,000 in the twenty-year period allotted—is 20,000,000 acres. This is but a minor fraction of the cultivable land in Manchoukuo. The whole of the land under cultivation in Japan Proper is 12,000,000 acres and every square foot is made use of. The Japanese even have something growing in tiny plots of a few square yards in semi-inaccessible places, often perched crazily on the side of a mountain ascending almost perpendicularly. This gives an idea of the two countries as far as the size for farming is concerned.

As shown above, the size of the usual farm is 40 acres, though as a rule only one-eighth of it, at the time of taking over, is capable of being tilled. The remainder of it is almost always forest and marshy ground. The forest provides wood for building all kinds of houses and accessories for the farm as well as an almost unlimited supply of fire-wood and charcoal. The swamps can, with little difficulty, be converted into rice fields. There are in most of the settlements large streams or small rivers that can be utilized for irrigating the uplands.

Each farm is divided into paddyfields or areas for other cultivation beside rice, pasture land for stock, plots for vegetables and flowers. Nearly all Japanese have their flower garden no matter how small it may be as a constant reminder of their beloved land. No beautiful ponds or miniature lakes of translucent water are to be seen, but as well as the beautiful blooms there are always the stunted shrubs so dear to the hearts of the sons and daughters of Dai Nippon.

The crops include soya beans, red beans, green beans and any other kind of beans that can be thought up and that can grow in Manchoukuo ; barley ; sorghum ; millet ; wheat ; hemp ; maize ; oats ; rice ; buckwheat ; potatoes. Hogs, sheep and other animals are raised.

As the years have passed the colonists have gone in more and more for all sorts of by-products as they have found that the proceeds from these sometimes go a long way towards placing them on the right side of the ledger at the end of the year. These are all on a minute scale but unremitting attention to this form of secondary production has been found to bring in tidy sums as far as their finances go. These, incidentally, are far larger than are ever seen among the farmers in Japan itself.

However, before the colonists can go in for any of these by-products they must have a cow and a pony. The former is for providing milk, butter and cheese and the latter for draught work, primarily. The settlers first think of producing the food necessary for the year and then if there is any left over, it can be sold.

The by-products are many. Included among them are the manufacture of such widely varied articles as homespun, bean soup material, pickles, bean paste, the bean sauce known as soy, saké and bean curd. They sell the results of their coal mining and lumbering. They make bean noodles, mats and gather firewood for sale while they turn out wickerwork, numerous bamboo implements and go in for charcoal making. They also add to their revenue by selling the fish they catch, the birds or small animals they shoot, or the beets they grow to the sugar factories. On odd occasions they raise flax or tobacco in quite small quantities and they have found that this would pay well on a larger scale but these are too insecure to be taken seriously as regular income-producers. A few extra yuan are sometimes made by carting goods from one place to another.

The great idea of the government is to make these colonists self-supporting and self-reliant. Thus, every year it expects that they will pay back a certain portion of the money expended on them. If the year has been a bad one through natural calamities the payment is at once waived. No interest is charged.

In the same way as soon as a settlers' village has been formed, framed in his box there, a Japanese consular policeman is always to be seen. When the Nipponese authorities consider that the group is knowledgeable and strong enough to deal with any dangers that might threaten it, the consular police officer one day " mysteriously disappears " and then the colonists must face their particular world themselves.

Though far away from their homeland the Japanese pioneers do not allow themselves to lose all touch with it. The government, as far as possible, when selecting the people to go to Manchoukuo, gets them from the same locality and the village where they settle it nearly always named after the place they come from. They are in this way interested in the same locality in Japan at least, and many of them have known one another or have friends or relatives that the others know of. There is therefore a distinct bond amongst them.

News from home or Manchoukuo drifts through to their village in an unaccountable way and when there is information on someone that all in the hamlet know or know of they all make is a point of gathering together at night after work is ended—with perhaps a few things to be done being shelved for future attention—and a grand old pow-wow takes place. With such gatherings they feel not quite so desperately far away from their native land.

As the married settlers, many of whom arrive " solo " begin to see that they can make good, they send for their wives and families as well as relatives to come across to help them in achieving real success on their farms. The single pioneers make arrangements for young, sturdy farm girls to make the trip with marriage as the objective. These marriages have turned out extraordinarily well and families have increased to such an extent that the schools, which were originally built with this very thought in mind, have proved dismally inadequate.

About a year ago, Miss Kazuye Kojima, sixth in the 400-meter free style swim in the Los Angeles Olympics of 1932, taking her cue from a popular Japanese novel, offered herself as a bride for some colonist in Manchoukuo. She was then twenty years of age, beautifully built, attractive and lovely of face and feature. When the young pioneers heard of this offer so many applied for the hand of this charming mermaid that she decided, after pondering over the problem, to draw lots for the winner.

Every village has a shrine, sometimes a temple and always a school. When going back and forth to school each day for the smaller kiddies, when the schoolhouse is some distance away, is too strenuous for them, the tots are put up at a dormitory for the five school days of the week. Then every weekend the father or the mother arrives to take them home till the following Monday morning when they have to be packed off exceptionally early to start in on their next week's grind away from the nest. The little ones simply bubble over with joy to be home each weekend after their enforced absence in pursuit of knowledge.

Then family chats take place on every possible occasion. The youngsters tell of what they have been learning and mayhap have something they can recite for their fathers and mothers, duly impressed by the progress they are making with their studies. They pass along any school gossip while the parents go into anything they think would interest the children as to what has been happening on the farm.

Everything has been thought out carefully nowadays before the groups leave for Manchoukuo and that is why each group invariably has one teacher or more among it. All other necessities are taken care of. For example, in each party there are invariably to be found carpenters, joiners, furniture makers, mat-makers and repairers, masons, charcoal burners, blacksmiths, straw-workers, gardeners, mechanics, surveyors, barbers and if the colony is to be a large one, there is always a midwife.

Pharmacists and nurses appear on the scene only when the size of the village warrants. The doctor and the veterinarian have plenty to do as they work on the adage that prevention is better than cure. The Japanese though moderately or even exceptionally healthy in their own land, frequently come down with typhoid fever or other diseases in Manchoukuo that they are practically immune from in their own country. Animals in the north and north-east of Manchoukuo often fall victim to the severe epidemics that sweep through that district, plague being one of the most deadly and frequent of them all.

The villages also leave nothing to chance as to defence against lawless invaders. Each house has plenty of firearms and ammunition. The villagers are trained almost like soldiers to that, should an attack occur they know exactly what they have to do and how to do it. They are drilled, the same as people in cities in this present year of disgrace, for air raids or passengers on a vessel in lifeboat work.

The Japanese colonists in Manchoukuo are proving a distinct asset to the country. The land which has been lying idle for so many centuries is now being developed under the most modern of agricultural methods. In Australia, land is given away practically free to those who are willing to take it up on the understanding that they develop it. They must ringbark the trees, which means that they will die in a certain length of time and provide land either for cultivation or for pasture. They must fence their holdings, put up a dwelling house and clear a homestead. This the government demands or otherwise the ownership lapses. One other proviso, of the utmost importance, is that owners must live on their land. No absentee landlords, such as have been the curse of Ireland, are permitted.

Now in Manchoukuo, the same as in Australia, the government is the one that gains, but the former is getting more than the latter. Hard working families are settling on the land which they will cultivate and add to the crops which are highly necessary to a nation which is mainly agricultural. Development is what it wants and this is what it is getting. But whereas Australia virtually gives the land away, Manchoukuo is selling this land at a fair price both for the government and the colonist.

Manchoukuo, although it is catering to the crying need in Japan for more land to till, is still getting the best of the bargain. It is obtaining industrious, honest inhabitants and at the same time having its land improved, also a vital necessity in a country so gravely lacking in the man-power to work on its vast area.

In addition, the settlements are thorns in the sides of the bandit groups, not only in their own villages but for some distance round. This is shown from the alacrity with which the native farmers gather round the colonies, setting to work on their own plots of ground with a will, for they know they will be as safe as it is possible to be in Manchoukuo if they are within reach of the Japanese pioneers, who are determined to let nothing interfere with the task they have on hand—to wrest an adequate living from the soil.

These native farmers also take advantage of the fact that the Japanese settlers are better equipped than they are for the care of the beasts of the field. They can frequently be seen herding their ailing animals in the direction of the settlement village where they know they will be sure to obtain the services of the veterinarian. These are willingly given as it is one method of keeping down the animal toll, as most of the epidemics among animals that ravage that portion of Manchoukuo are highly contagious.

Since this Japanese immigration to Manchoukuo started, few have shown themselves of insufficient moral fibre to "stay the course." Some certainly have had to leave on account of illness —which might happen in any work. But the number that has left deliberately because of the work being too assiduously and wearingly insistent, forms only a tiny fraction of the original figure that left to start in on a life in pastures new.

The colonies themselves have increased astoundingly in size. This is on account of the pioneers arranging not only for their families and relatives, but also others to come across to share in the great experiment. In addition, births are most numerous while deaths are the opposite.

The government at Hsinking does not look upon these colonists as persons to add directly to their revenue. Indirectly, of course, they are, as they are adding to the value of the land. The idea is development with self-sufficiency for the settlers. And these same settlers have gone on better as they sell whatever they can spare, while almost every Japanese colonist in Manchoukuo has something he can turn into money after providing for the wants of his particular family and dependents.

These pioneers are doing a grand job in their new homes. Even though the work is almost unbearably hard there is no grumbling. They have considerably more land than they had in their own country. They can produce crops many times the quantity they could grow in Japan. It is true that very few of them will ever be able to go back to settle again in their own little Island Empire but theirs is a life that appeals to them. It is something tremendously difficult and they are winning through.

Every year that they remain on their holdings they are adding a little to the comfort of their lives, if comforts they can be called. Perhaps it would be better to say that life becomes less rigorous with the years. They look with pride at the land they have snatched back from nature and the feeling is good. And—a point which must not be forgotten—they are in their small way doing something for their government, which is making leeway for others left behind who are not strong enough for this agrarian battle or who are too old or too steeped in isolationism to make the attempt.

The Japanese government should be more than pleased with the results of its colonizing activities in Manchoukuo. It might have had the best material in the world and failure been its lot if it had not laid its plans so carefully and in such detail. The government, sending these people off to Manchoukuo, knew that it had chosen the right people. It had done everying possible to see that things turned out properly after they arrived and set about their tasks. It metaphorically patted them on the back and said, "Well, there you are. We've done all we can to help you to be a raging success. The rest is up to you. Go ahead and see what you can make of it but . . . do your best."

The colonists appreciated the government's efforts. They realized they were practically in the same position as a son when his father has had him educated and given him a stake to start off on the road of life with success as his destination. The father can do no more. What happens after devolves upon the person himself. They therefore resolved to do their part—and they had done it in splendid fashion.

There is no question nowadays as to whether Japan can colonize or not. She came late into the field, it is true, but she had at the same time all the different methods that had been tried by other countries to examine, cull and use those which had proved best, with her own particular application on the bases of nationality, locality and individuality.

Japan has excellent knowledge now of how to colonize a country though that portion of Manchoukuo that has been turned to account forms only a minor part of the country. But, what can be done on a small scale can also be carried out in more extended fashion with all things being equal. Manchoukuo has been the testing ground and the results have been even a little better than the most sanguinary expectations.

The question at the moment is how many colonists does Nippon wish to send to Manchoukuo and will this make any appreciable difference to the "annex" that she requires for her surplus millions. The future only will supply the answer.

Cement Factory for Kweilin

Plants for a G.$10,000,000 cement factory are now being installed on the outskirts of Kweilin, capital of Kwangsi province, and early next year the factory is expected to be in full operation with a daily output of 300 casks of cement, a Kweilin message to the *Cheng Yien Pao* states. As a precaution against Japanese air raids, the factory is installed in a large cave.

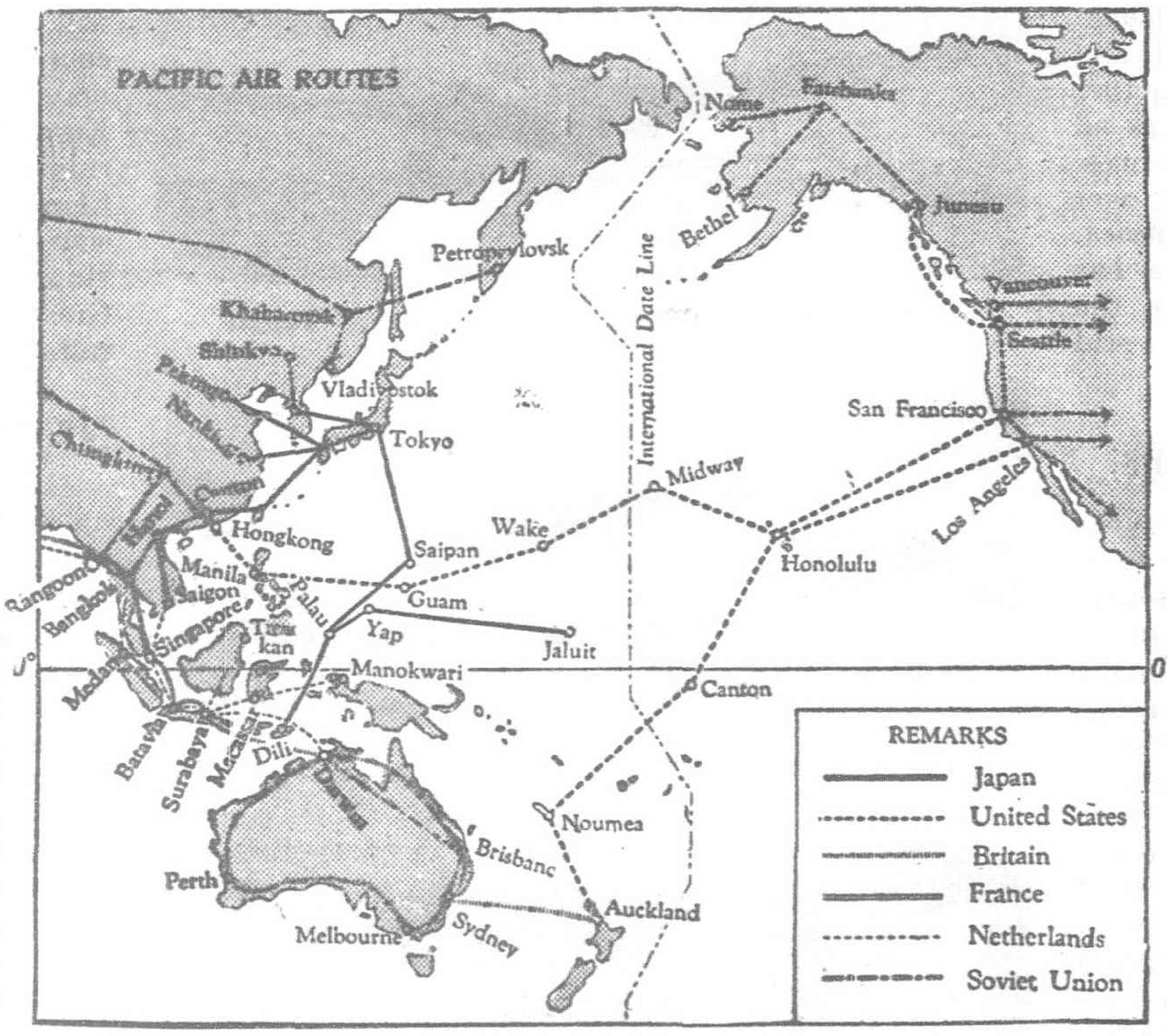
The Pacific Air Routes

By TAKEO OHKUBO

(Bulletin of The South Sea Association)

It is within the past ten years or so that a network of airways has come into being over the Pacific. In 1930 a regular air service was inaugurated between Holland and Batavia. The following year saw the establishment of an airline between France and Saigon. Then Great Britain and the United States instituted their respective routes connecting their countries with Hongkong and New Zealand. Japan followed suit last year, starting her so-called southward airline. Thus began a keen competition in the air among the great powers of the world.

The situation of France and Holland in the European war caused some confusion in the Pacific air routes. France has already discontinued her Far Eastern route, while Holland is barely maintaining her K.L.M. line to Netherlands Indies. The struggle for air supremacy is, therefore, among the Big Three—Japan, America and Britain. We offer to undertake here a cursory historical survey of the development of trans-Pacific air service and a brief consideration of its future.



Pan American Airways and the Pacific

America's air policy has developed through three stages. The first stage ended in 1925 or thereabouts. Up to that time America had concentrated her energy and attention upon the inauguration of a trans-continental airway. After succeeding in doing this, America undertook the task of establishing the Pan American airway connecting the North and South Americas, the importance of which Monroe had proclaimed. America thus commenced to move onward with giant steps in the field of aviation. All the small air transport concerns in Central and South America became gradually absorbed by the colossal capital of the United States. In 1930 was completed a great beltline of about 12,420 miles with Miami and Brownsville as its basic points.

Then came the time when American air policy began to aim at opening trans-oceanic routes to Europe and Asia. Three courses have been pursued for America's air advance to the Pacific—(1) the northern course via the Alaska route; (2) the central Pacific course to Hongkong through the Tropic of Cancer; and (3) the south Pacific course that links America with New Zealand and Australia.

It was a cherished dream of eighteenth-century England and France to link Europe with Asia through the northern Pacific. William Adams, English pilot, told Iyeyasu, the first Tokugawa Shogun, whom he served, that it was possible to go to Europe from the northern parts of Japan. In 1931 Colonel C. A. Lindbergh carried out a survey flight over the northern Pacific. Later, Pan American Airways bought the air transport concern in Alaska for the purpose of achieving northward expansion. But this plan was neglected for a while as a result of the establishment of an airline to Hongkong over the central Pacific.

In 1938 America made a survey flight by the Sikorsky S-43 with the object of connecting America and Alaska. In June, 1940, Pan American Airways started a regular air service between Seattle and Juneau by the Sikorsky S-42 Flying-Boat. At present the distance is covered in seven hours. It is reported that from this summer on the *Boeing Stratoliners* (stratosphere planes) will be put into service instead of the Sikorsky. This particular airline is evidently aiming at expansion to East Asia via Nome or some bases in the Aleutian Islands. It will not be very long before science will have conquered all the difficulties hitherto presented by fog and other meteorological phenomena.

As to the central Pacific course, this originated in an air race from San Francisco to Hawaii run by American army and naval officers. In the summer of 1925 an American officer together with four other men set out on a flight from San Francisco to Hawaii by seaplane. On the way they ran short of fuel and were forced to alight on the ocean. After nine days' drifting or rather sailing by means of sail devised by their wit and ingenuity, they managed to escape death. Then, in 1927, Lieutenants Maitland and Hegenberger succeeded in a flight from San Francisco to Honolulu on a three-engined landplane. The success was due largely to taking advantage of the trade winds. It was then considered impossible to fly back to the continent against the wind. But the indefatigable zeal and efforts of man have at last conquered this difficulty.

Since the successful flight across the North Pacific achieved by Lindbergh, Pan American Airways had been making a close survey as to whether the proposed trans-Pacific route should be round the north or via Hawaii, Midway, Wake and other islands in the central Pacific, until at last the latter course was adopted. The reasons for this favorable decision were manifold. First, it was regarded as the shortest cut to China in which America is interested politically as well as economically. Secondly, this route is favored with a better meteorological aspect than the northern one. Thirdly, this route involved no necessity for diplomatic negotiation with other countries.

Thus, in April, 1935, Pan American Airways carried out a successful flight from San Francisco to Honolulu by the Sikorsky S-42 Flying-Boat constructed for the purpose. In June of the same year a survey flight to Guam was achieved. Then, in November, the Martin 130 Flying-Boat *China Clipper* achieved the first flight to Manila. The *Philippine Clipper* followed suit. Regular air service was thus opened between San Francisco and Manila. In April, 1937, the route was finally extended as far as Hongkong, the total mileage increasing to 8,694. The distance between America and East Asia was thus shortened to a week's flight. In February, 1939, the Martin flight boats were replaced by four-engined machines of the Boeing 314 type. This new shp is twice as large as the Sikorsky S-42 and half as large again as the Martin 130. It is the largest flying-boat in the world and has a maximum speed of about 200 m.p.h. It can accommodate 74 passengers on a short distance flight and 50 on a flight over a distance of 3,100 miles.

In regard to the southern Pacific route, Pan American Airways signed an agreement with the New Zealand Government in 1935, which enabled the company to undertake to operate a service between Honolulu and Auckland. The significance of this airline lies in the fact that it constituted the southern half of the American defense line over the Pacific extending from the Aleutian Islands to Australia. In the spring of 1937 the Sikorsky S-42 Flying-Boat carried out a survey flight from Honolulu to Auckland via Kingman Reef and Pago Pago. Then in December of the same year a regular service was opened. But the following year the *Samoan Clipper* met with disaster near Pago Pago and the service had to be discontinued for a while.

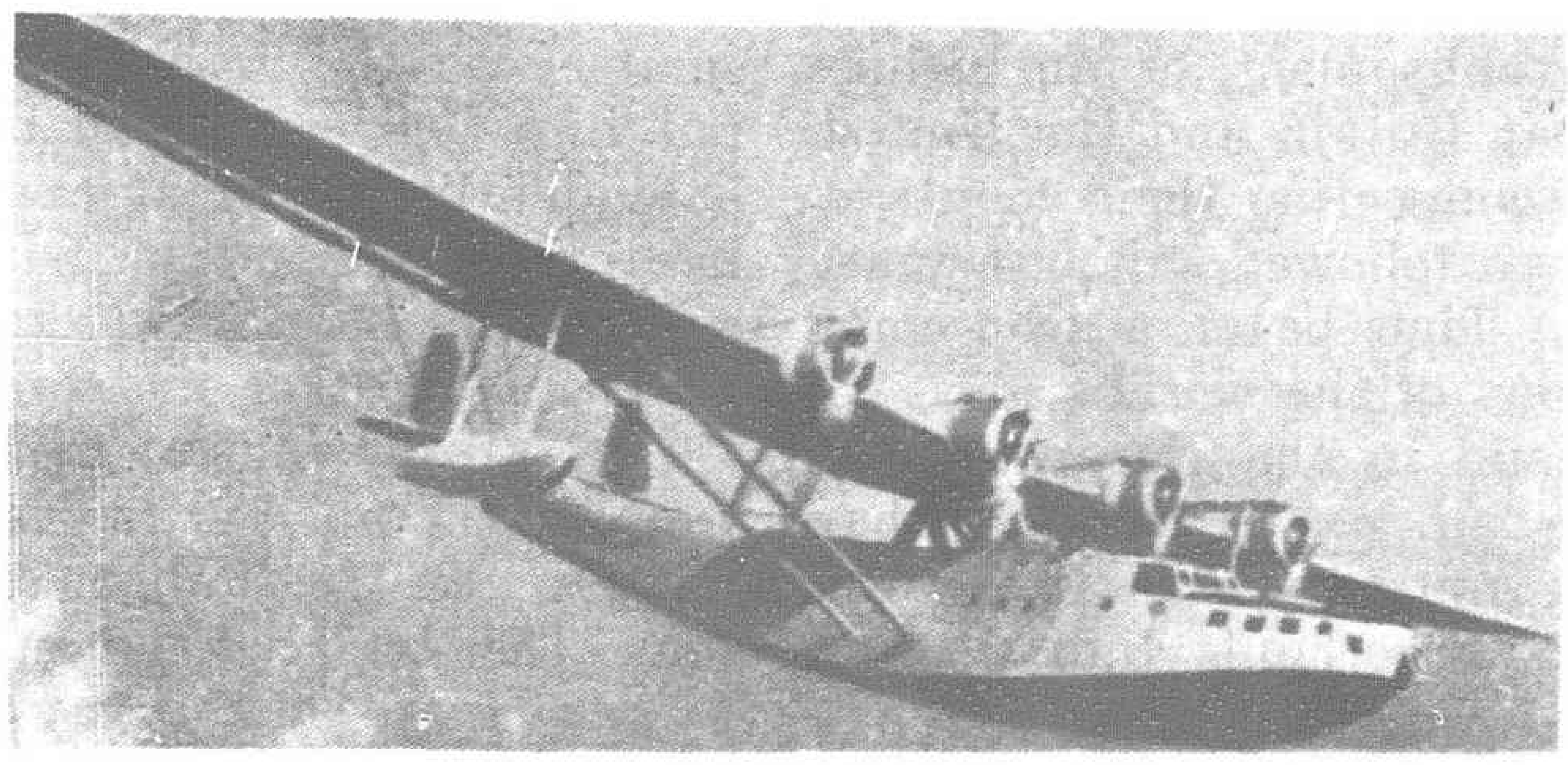
After this accident Pan American Airways decided to shift the course slightly to the west, connecting the Hawaiian Islands with Auckland via Canton and Numea. In August, 1939, the first trial flight along the new route was made by the Boeing 314 Flying-Boat *California Clipper*, and then in July, 1940, when the Allies' position on the European continent had reached a crisis, a regular southern Pacific service was inaugurated.

Soon after the establishment of this air service, the world situation suffered so complete a change that all the British dominions and colonies on the Pacific—India, Malay, Hongkong, Australia, New Zealand and Canada—came to be linked together by American air routes. Just as all roads led to Rome in ancient times, so to-day all airways extending over the British Empire lead to America. The United States of America has taken over from Great Britain the task of attaining supremacy in world air transport.

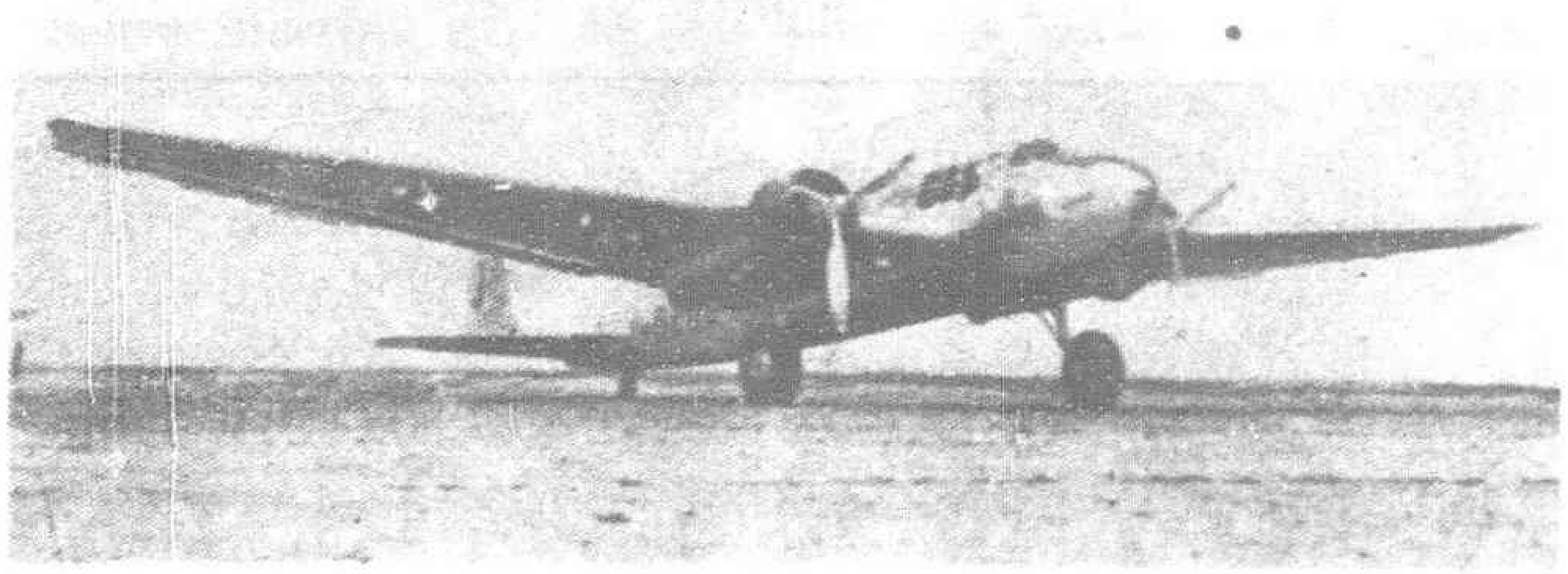
Imperial Airways and the Pacific

Immediately after the Great War, Mr. Winston Churchill, then Secretary of State for Air, mapped out a gigantic plan to achieve air supremacy in the world. The program was to establish Empire Air Route between the British Isles and New Zealand—one way from England to New Zealand via Egypt, India, Malay and Australia and the other way from England to New Zealand via Newfoundland, Canada and over Pacific—and another Route connecting England and South Africa via Egypt. With this object in view was born in 1924 Imperial Airways, Ltd., a government-subsidized air transport company.

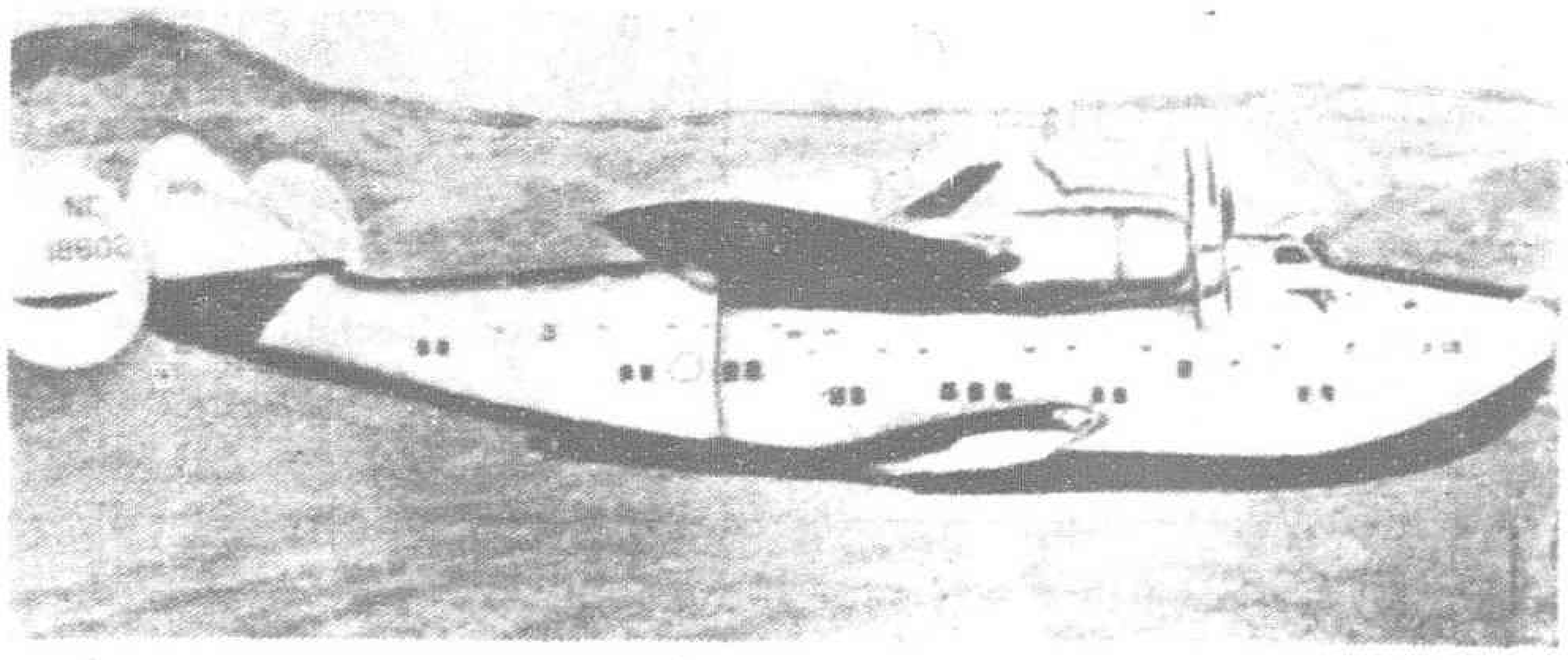
In 1933 the proposed airline was extended as far as Singapore, and then to Brisbane in the following year. A total of about 12,400 miles thus came to be operated. At first landplanes were employed. In the summer of 1937 these planes were replaced by four-engined Short Empires, each capable of accommodating 24 passengers and Sydney became the terminus of the line. Then in 1936 a branch airline was established between Penang (altered to Bangkok afterwards) and Hongkong. The distance between London and Sydney came to be covered in ten days and that between London and Hongkong in six days. Thus the distance between the British Isles and the Pacific became considerably shortened. This route was later extended from Sydney to Auckland across the Tasman Sea, there meeting the American air route.



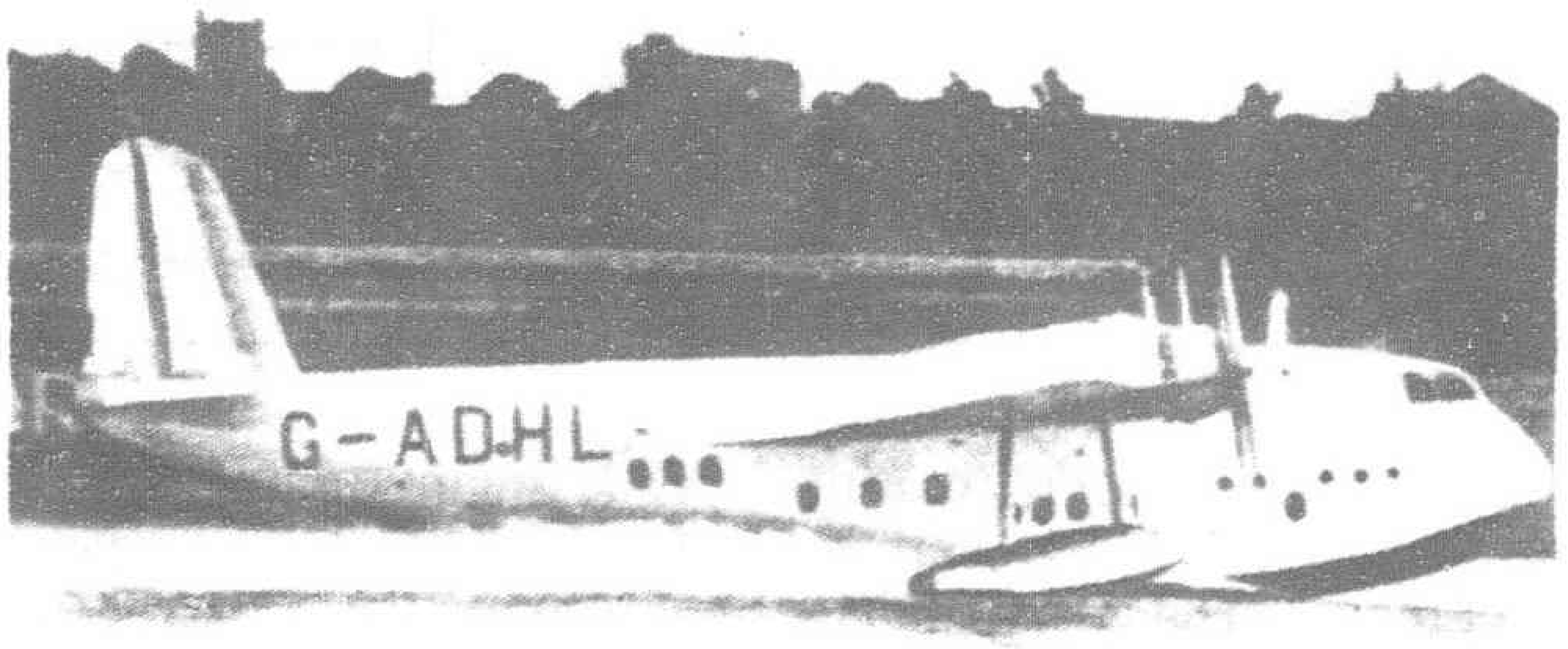
" Kawanishi flying-boat," Japan



" Twin-engined Mitsubishi land-plane," Japan



" Boeing 314 clipper," United States



" Short Empire flying-boat," Britain

The British airline between England and Vancouver across the northern Atlantic and Canada was partially opened in the spring of last year, namely between the Atlantic and Pacific coasts of Canada. The trans-Atlantic and trans-Pacific routes had now to be established to complete the proposed Empire Air Route via Canada. But the plan to institute a route over the Atlantic was not materialized owing to a shortage of material, while the proposed southern Pacific course became difficult of realization on account of America's objection to entry into Hawaii by British planes. Now that Britain is busy with war, she may have to abandon the plan to secure supremacy in trans-oceanic air service.

Italy's participation in the current war caused hostilities to spread to the Mediterranean, completely cutting off the British air route connecting England and the Pacific. Britain has managed to maintain part of the Empire Air Route on the strength of her sea power, namely from Durban in South Africa to Australia and New Zealand via Alexandria and India. Grim is Britain's determination to cling to the Pacific route, despite the fact that a crisis of vast dimensions is staring her in the face.

Britain's cherished dream of achieving the world's air supremacy will have to share the fate of the country itself, whatever that fate may be. The downfall of the British Empire, if it happens, will spell ruin for her Empire Air Route. Mr. Churchill, the advocate of the necessity of establishing Empire Air Route, is now Prime Minister of Great Britain. Upon his shoulders rests the destiny of Britain.

Japan's Air Route Over the Black Current

The islands of all sizes that constitute Japan Proper stretch like a bow. The silvery planes flying between Japan and the Palau (Pelew) Islands via Saipan suggest so many arrows shot from a bow.

Nearly 400 years ago Ferdinand Magellan, the discoverer of the Strait of Magellan in South America, dropped anchor in the blue waters of Saipan after a voyage of 130 days. This most important island of the Marianas is within measurable distance of Guam, and will grow increasingly important as a base for commercial air service. Palau is ringed in by coral-reefs and is about 620 miles straight from Celebes, and 1,240 miles from Timor, a Portuguese island, and Port Darwin, Australia. At a time like the present when a trans-Pacific air route is pregnant with political and economical significance, it is most important for Japan to develop her South Sea airline.

Then there is Jaluit Island at the eastern extremity of the Japanese mandated territory. Roughly speaking, it occupies the center of the Pacific Ocean. If the Pacific were to be divided into two spheres of influence between Japan and America, Jaluit would certainly constitute the eastern gateway to the East Asian sphere.

In April, 1939, the four-engined Kawanishi Big Flying-Boat with accommodation for 17 passengers shuttled 2,500 miles between Yokohama and Palau over the "Black Current." The planes employed bore the appropriate names of *Kuroshio* ("Black Current") and *Asashio* ("Morning Tide"). The distance between

Japan Proper and its " life-line " in the South Seas is now covered in two days, planes plying twice a month. Intercourse between islands under Japanese mandate had hitherto been very inconvenient. The establishment of an air route in this part of the world marked an epoch in the history of intercourse between islands, as well as between Japan Proper and the islands. Since September of last year several survey flights have been made between Palau and Jaluit over a number of islands that dot the ocean like stepping-stones. Then in January of this year the *Akebono* (" Dawn ") flew to Jaluit along the equator as the first flying-boat on this regular service. The distance between Palau and Jaluit is something like 2,600 miles. It requires five days to fly from Palau to Jaluit via Truck, Saipan and Ponape, and three days to fly back because the plane does not stop at Saipan on the return trip. Planes on this service make the round trip once a fortnight.

It was also decided to carry out survey flights once a month between Palau and Timor, a distance of some 1,200 miles, beginning in November last year. This was the first time that a plane bearing the Rising Sun mark on the wings had ever flown over the equator. It used to take a month to go from Palau to Timor, but now this has been shortened to three days, a fact which will doubtless conduce to the development of intercourse and the welfare of mankind.

The South China Sea is the Mediterranean of East Asia. It is to the Pacific what the Mediterranean is to the Atlantic. If Singapore is to be likened to Gibraltar, Hongkong may be compared to Alexandria. Hongkong has played an important historical part in the van of British and American imperialism. Not only is it the terminus of the American trans-Pacific airline, but it is linked with Chungking, Kunming and Rangoon by the route maintained by a Sino-American joint concern. Britain's Far Eastern airway linking Bangkok and Hongkong, though suspended at present, forms one of the sides of the " aerial triangle " over the Pacific, the other two sides being the American south Pacific route connecting Hongkong and New Zealand and the British route connecting Rangoon, Malay, the Netherlands Indies, Australia and New Zealand. A glance at a map of the world will show what islands are within this network of airlines.

Not to be behind, Japan established an air route to Thailand. In November last year a historic agreement was signed between the two countries. The *Yamato*, a Mitsubishi twin-engined plane, blazed the aerial trail. Thus the bonds of union between these two independent countries in East Asia became tightened by the creation of the airline. Immediately after its inauguration, however, the actual operation of this service had to be deferred for a short while owing to the political interference of French Indo-China. Nothing daunted, the *Tatsukaze*, a sister plane of the *Yamato*, flew from South China and, sailing round Indo-China, reached Bangkok, thereby keeping up the prestige of Japan.

Meanwhile, the pending dispute in regard to landing at Hanoi was amicably settled and the Japan-Thailand air service was put into operation. The first plane that flew on the service was the *Matsukaze* (" Wind on the Pines ").

The Japan-Thailand air route is as follows : first day—from Tokyo to Taihoku ; second day—from Taihoku to Hanoi via Canton and Haikow ; third day (in the morning)—from Hanoi to Bangkok. The distance covered is about 3,000 miles. Land-planes of the same type as the *Soyokaze* (" Gentle Breeze ") and the *Nippon*, capable of seating eight passengers, are operated once a week on the route.

Then in the autumn of last year, another route was established along the coast of French Indo-China. This was because relations between Japan and Indo-China had improved and intercourse had become frequent. This route branches off from Hanoi. Planes on this route land at Touran and Saigon on the way and then fly on to Bangkok. The Bangkok route via Saigon has a total mileage of about 4,000 from Tokyo. Equipments employed on this service are the Mitsubishi 21 landplanes, each with accommodation for eight passengers, and are run once a week.

THE SOUTH SEAS

(Continued from page 234)

resigned and that he had assumed authority "on behalf of the French Empire crushed under the German boot but not yet strangled."

Nevertheless, the pro-Vichy group still had a kick left and M. Soutot had to form a large and well-armed battalion to get the infantry and artillery barracks and the coast batteries away from him. This was accomplished without serious bloodshed after which the pro-Vichy officers and their families were put on board the *Dumont d'Urville* which left the island, ostensibly for Indo-China. But where she really did go is still obscure, especially as all her crew were strongly pro-de Gaulle.

Meanwhile on the other side of the Pacific, at Tahiti, M. Gery had practically been deposed by a pro-De Gaulle committee which included George Bambridge the part-American Mayor of Papeete. A " plebiscite " was then taken in which all the natives and Chinese who wanted to do so appear to have voted. Anyway there were 18 votes for Petain and more than 5,000 for De Gaulle. Following this, M. Gery took the next boat for America, *en route* to France, and an elderly Frenchman named Mansard was appointed Governor *pro tem.*

The deposing of M. Gery was generally regretted because he had been the most popular and efficient Governor in many years. But having had his orders from the authority he considered to be directing his country, he did not feel himself in a position to go over to the De Gaulle Tahiti committee.

Presently M. Mansard, being in ill-health, gave up the position and in his place there was appointed Dr. De Curton. The appointment was approved by a radio from M. Sautot, in New Caledonia. Dr. De Curton had been acting as Governor of the Etablissements Francais de l'Oceanie. He took over the post on September 30 with several of the principal citizens as an advisory council.

There was no rioting or disturbance of any kind in Tahiti, except upon the exceedingly unfortunate appearance of two big American cruise ships in August, the *Mariposa* and the *Monterey*. My advices are that this resulted in three days of the " maddest orgy " poor Tahiti has ever experienced, continuous fights, most of the cruise passengers on an extended drunk, much property damaged and the island debauched generally.

However, the shopkeepers, especially Chinese, appear to have had a field day, explaining that in the confused exchange situation—at one time the Chinese of Papeete were paying more than 100 francs to the dollar despite official efforts to check inflation—it was necessary for them to be on the safe side, the store people sent their prices skyrocketing some thousands of per cent when the persumably rich tourists from the American ships appeared. They even demanded, and seem to have obtained, as much as U.S.$1 for a glass of local beer. It is said that more than $15,000 was left in Papeete by the cruisers.

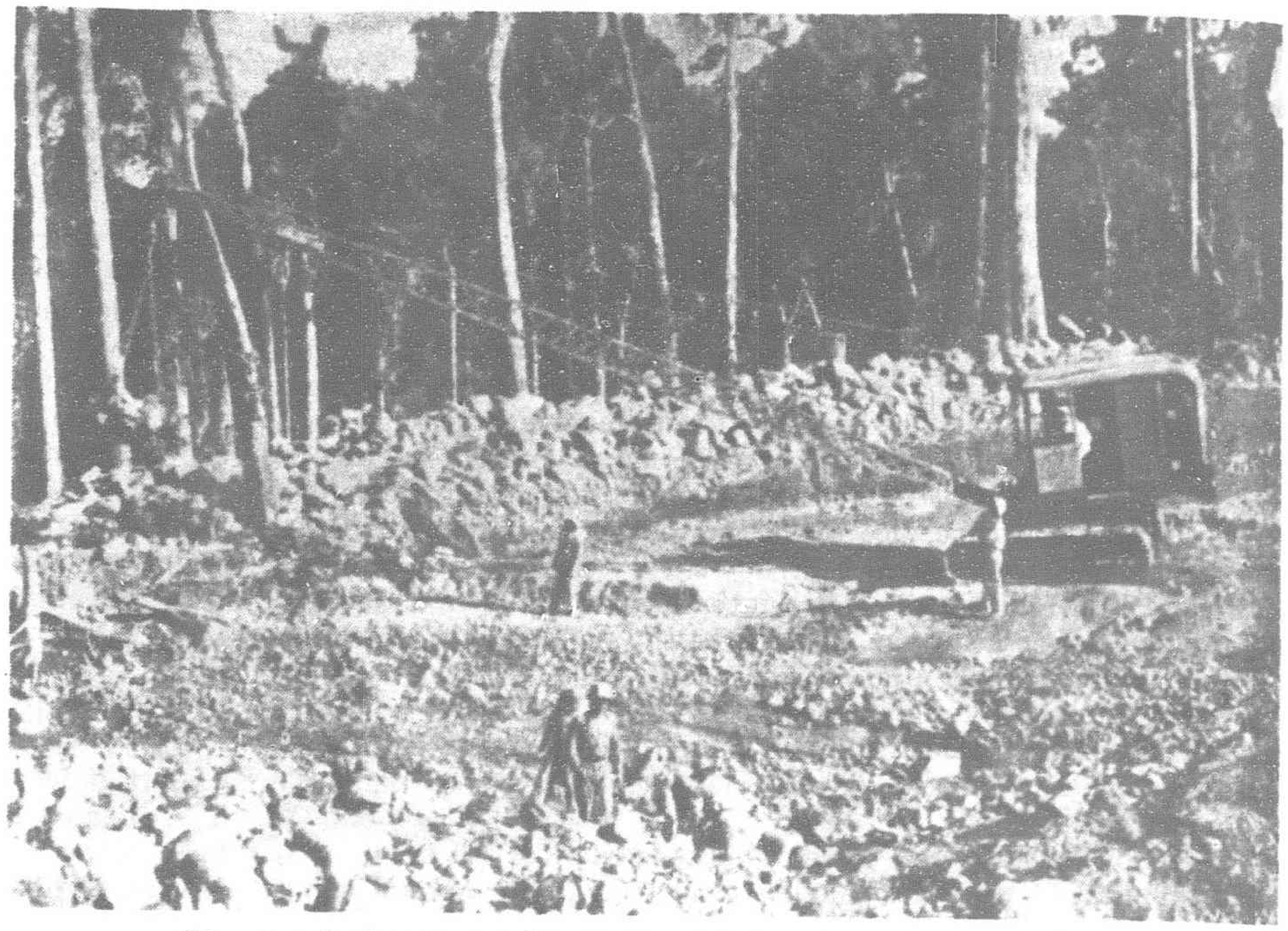
Certainly it has been needed since for Tahitian economy seems to be in a very bad way indeed. As I have explained before, the copra market is in the throes of the worst slump it has ever known, and there isn't much else for Tahiti to sell. As for foreigners, I read the following in a letter from one of my oldest and best friends there. " The American colony is 'evaporating fast. The few who still remain are on the shipping company's waiting-list." Then he adds, and knowing him as I do I understand with what quiet satisfaction, " our island is returning to something like the quiet and peace we knew before tourist exploitation." When I read that I certainly felt a nostalgic pang.

It seems, however, that New Zealand and Australia have more or less taken Tahiti under their wing, economically speaking. Arrangements have been made for them to buy such products as Tahiti has for export and they seem also to be supporting the Banque d'Indo-Chine in Papeete in its handling of currency. There is also some talk of establishing for French possessions in the South Seas a France de Pacifique to have British backing through the De Gaulle Committee and to be pegged " at 176 to sterling which was the pre-war rate at Anglo-French exchange. The situation as to the Banque d'Indo-Chine is, however, a curious one inasmuch as its head is the very anti-British Paul Beaudouin. Yet through the Tahiti and New Caledonia branches in this institution Australia and New Zealand continue to operate. There is, however, a scheme on foot to take the South Sea branches entirely away from French control and put them under British charge.

At present an occasional British cargo boat is touching at Papeete *en route* between Australia and Vancouver. So the paradise of the South Seas is probably doing well enough. But who knows when an armed German raider will turn up and upset things ?

California Methods in Hydraulic Mining Are Used at Surigao

(American Chamber of Commerce Journal, Manila)



Cleaning bedrock and boulders with Lorain crane at Surigao

GOLD that occurs in a placer formation is usually recovered by dredging as at Coco Grove, or by operating a drag line for excavating the gravel and subsequently transferring it to a floating scow where the gold is caught on tables and riffles. There is a third method, more picturesque and where conditions are right, lower in operating cost than the others, known as hydraulicking. This depends upon breaking down a gravel bank under the impact of a stream of water expelled from a giant under a high head and then using the water to conduct the gravel to sluices, where the gold settles against riffles in the boxes and is later recovered in the cleanup.

For successful hydraulicking the mining conditions are simple, but admit of little variation. The first condition is that there shall be a plentiful supply of water available that can be piped down to the gravel bank under a high head, at least 200 feet above the giants. A second is that there shall be adequate room for tailings disposal, preferably by gravity, where the excavated material will not fill up a stream bed and not interfere with agriculture below the mine. A third depends upon the character of the gold-bearing gravel itself—it must not be too compact to be disintegrated by the giants, there must not be too much clay which would tend to carry off any fine gold, and there must be relatively few boulders that would choke up the sluice boxes. The bedrock should have a uniform slope, and not be so soft as to be cut down under the impact of the water.

Hydraulic mining had its heyday in California during the latter part of the last century, when millions of cubic yards of gravel were hydraulicked at operating costs unbelievably low, in some cases for three or four cents per yard. The enormous amount of gravel that was sent down the river valleys resulted in disastrous floods and great damage to the farm lands, and caused the passage of the Caminetti Act about 1890, which practically put hydraulic mining out of business, as the cost of storage dams for tailings was believed to be prohibitive.

Hydraulics in Surigao

In the Philippines there is one instance of successful hydraulicking for gold that has been in operation on a moderate scale since 1936. About 14 kilometers south of Surigao the North Mindanao Mining Company has worked its placer deposit by conventional hydraulic mining methods, washing about 20,000 yards a month when in full operation, and recovering about 40 to 60 centavos a yard from the gravel in gold. The mine is in charge of Aaron Parry, an oldtime hydraulic miner from Trinity county, California, where hydraulicking used to flourish. Mr. Parry has built up an efficient crew of operatives from the natives around the mine. The operating practice at the North Mindanao property was considered of sufficient interest by the Bureau of Mines to justify an Information Circular to be written on the subject.

The gold placer that is being worked occupies a broad ridge of ground that lies between the Cansuran and Tugunan rivers, and has been proven to carry values for nearly a mile in length and about 1,500 feet in width. On the surface the ground originally looked about as unlike the conventional idea of a placer as can be imagined, as a heavy forest covered the entire area, which had to be cut away before mining operations could begin. This in itself was no small labor. Testing the ground was difficult as trails had to be cut through the undergrowth, and the ground from the test pits carried away laboriously to the nearest water for panning and estimating the gold content. This important work was not neglected, and testpits were sunk to bedrock on the corners of 200 foot squares throughout the entire area to gain a definite knowledge of the quantity and distribution of the gold.

The property had certain definite natural advantages for hydraulicking. Lying as it did no top of a ridge that dropped sharply on either side to the river valleys below, tailings disposal offered little difficulty, as the waste could be run by gravity from the sluice boxes and deposited on the hillsides. To obtain a water supply, a system of flumes and ditches, totalling some 18,000 feet in length, was built about 250 feet above the site of the hydraulic operation, which brought in practically the entire drainage of the local watershed to the reservoir, which had a storage capacity of about 2,000,000 gallons of water. No little ingenuity was shown in building the flumes which were constructed of native lumber on the property. The ravages of termites make the maintenance of these flumes a troublesome matter, as the timber lasts only a short time.

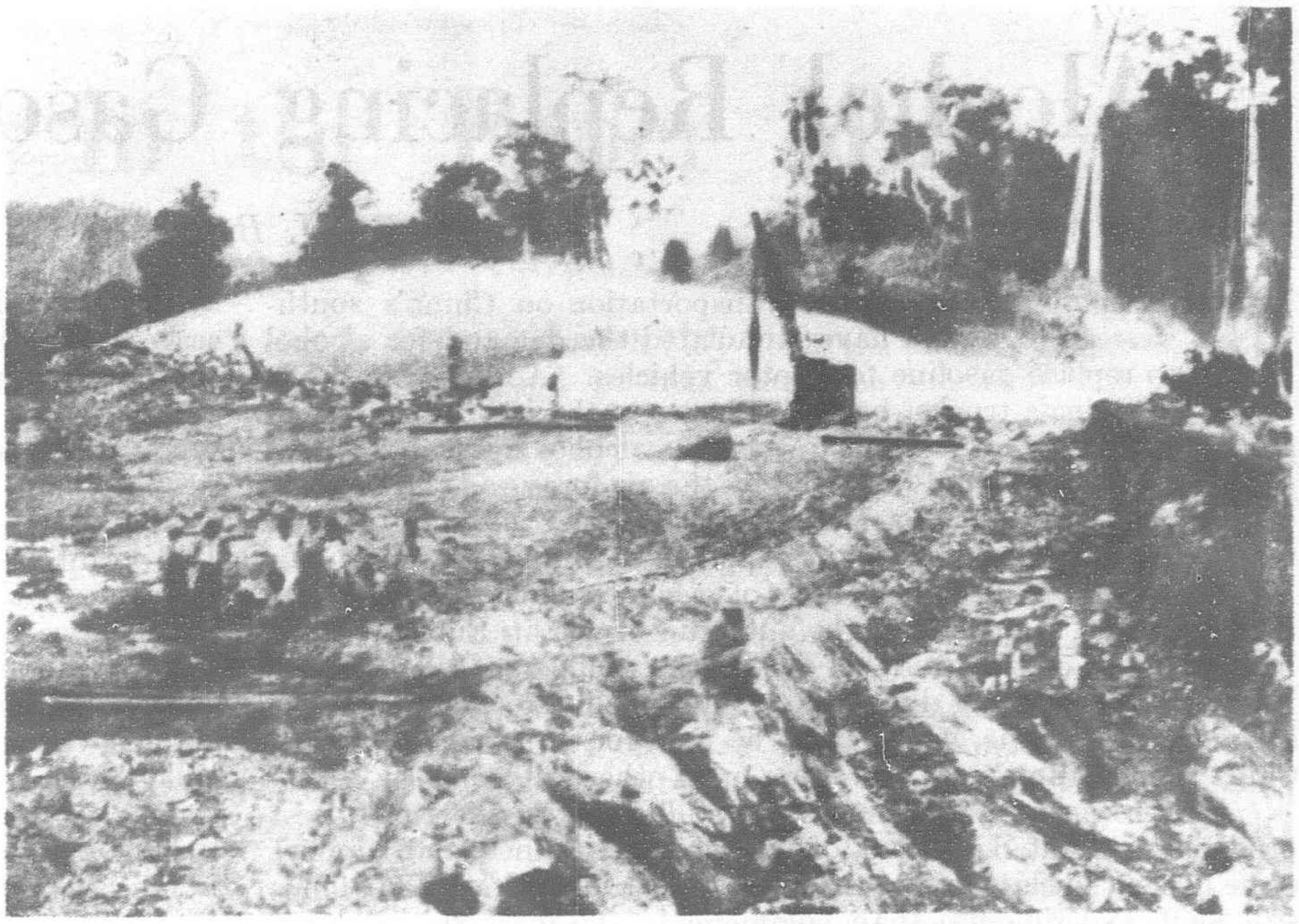
Fascinating Operation

From the penstock of the reservoir the water is taken to the giants through a pipeline, and is discharged against the gravel bank under a 250 foot head. Piping, as it is called, is a fascinating operation to watch. The powerful streams of water from the giants are directed against the bank to undercut it and cause it to cave. Considerable skill is needed to make the ground cave as desired, and after it has collapsed, to move the gravel toward the sluice boxes. Under the furious impact of the water boulders weighing hundreds of pounds are sent hurtling along like pebbles. A high-powered giant is a dangerous plaything. A story is told in California of a practical joke on some yokel who saw nothing dismaying in a giant and took a bet that he could cut through the stream from the nozzle with an axe. He broke his arm in the attempt.

Disposing of the great number of boulders encountered from time to time in the gravel bank has been a serious problem. Those that were too heavy to be sluiced away had to be moved to one side to permit the bedrock to be swept clean by the water and this entailed considerable labor. A solution was finally found in the purchase of a No. 40 Lorain Diesel-powered crane with drag line equipment. Using a sling made of iron chains, the men bar down the boulders upon it; it is then picked up by the crane which deposits the load of boulders in neat rows behind the giants. The native operators who have had no previous experience before with heavy machinery have learned to operate the big crane with an ease and dexterity that speaks a lot for their adaptability.

Some gold is caught in crevices in the bedrock, but most of it is recovered in the riffles in the sluice boxes. These conisst of strips of hard wood laid crosswise to the flow of the gravel in the boxes, and are covered with pieces of flat iron to protect them from abrasion as well as to give a peculiar sort of boil to the current which assists in settling the gold particles. The gold, being heavier than the gravel, tends to settle to the bottom and is caught between the riffles along with the black sand.

Sluice boxes are cleaned up twice a month. At this time the giants are shut down and the bedrock is swept clean of boulders. Every crevice is carefully examined for gold particles and the whole surface is carefully gone over. The riffles in the sluice boxes are then pried up and the gold and black sands are shovelled into cans for the final cleanup. Even the lining boards in the sluice boxes are vigorously brushed with a whisk broom to dislodge any gold particles that might be attached to them. After long use the lining boards are burned, the ashes saved and panned and some additional gold is thus recovered. The whole cleanup process takes about half a day. Then the riffles are replaced in the boxes and piping is resumed for another two weeks.



Hydraulicking gold placer ground at Surigao

Exciting Cleanups

Cleanup is an exciting time at the mine for it is only then that the results of much hard labor and effort can be actually seen and weighed up. Until that time the amount of gold that will be recovered is more or less conjectural, as gold placers are notoriously erratic and the gold content of the gravel may vary within wide limits. The cans containing the cleanup are brought to a small stockade surrounded by wire fencing. Within is a concrete basin filled with water and around the pool a dozen native girls are seated, each with a batea, or wooden pan, in the use of which they are highly proficient. Each girl takes several pounds of the concentrates in her batea, and after a few dextrous whirls, a long rim of yellow gold peeps out from the mantle of black sand. A few more whirls, a final delicate manoeuvre of the batea, and the last of the black sand has vanished and the gold is ready for drying and weighing. The young women enjoy their work, and consider it an honor to be chosen for the cleanup. No doubt the workers in the Mint have the same vicarious feeling of being very rich.

In the popular mind placer mining is usually associated with finding handsome nuggets that represent a small fortune in themselves. In the North Mindanao mine nuggets even as large as a pea are few and far between. Most of the gold particles are classified as medium to fine gold, that is, gold that is less than one millimeter (0.04) in size. It requires about 10 to 25 of such particles to have a value of one centavo. Only about six per cent of the gold recovered is coarser than $\frac{1}{8}$-in. Like most placer gold the fineness is about 800, and worth about 56 pesos an ounce.

Hydraulic mining is generally seasonal in character, as it is dependent upon a supply of sufficient water to operate the giants. In Surigao the rainfall has averaged about 140 inches annually, with the greatest precipitation from October through March. These months consequently witness most activity on the North Mindanao property. During the so-called dry season (although rain falls every month of the year) piping depends on use of storage water in the reservoir, and short periods of shutdown are necessary for the water to accumulate.

Manchoukuo Building Huge Dam

Less than three hours by train from the Manchoukuo capital, one of the world's biggest dams is in the process of construction. The Kirin, or Fengman Dam, situated on the Second Sungari 21 kilometers upstream from Kirin city, will be completed in three years. It will be only 20 per cent smaller than the United States' Boulder Dam.

Its foundations, drilled deep into solid rock, were laid last year. One-third of the actual dam has been built, and the power house is expected to operate in a small way next year. Figures differ regarding this project's eventual generating capacity, but annually it is expected to be more than double the output for the whole of Manchoukuo in 1939.

It is claimed that the artificial lake created by the dam will be the biggest of its kind in the world. It will be nearly 180 kilometers in length, have a circumference in the neighborhood of 2,000 kilometers and a total surface area of over 500 square kilometers. About 52,000 persons living in 8,000 households in the part of the countryside which will be flooded by the lake are now being evacuated and re-settled elsewhere.

The dam itself is 1,200 meters in length and 91 meters high. Its width is 656 meters at the base and will be eight meters at the top. Nine million tons of concrete will fill its framework. It will be proof against earth tremors and against the dangers of ice and snow. It will even be bomb-proof, it is claimed.

Except in winter months, when certain of the work is slowed down, 12,000 workmen are employed on this job, comprising roughly 2,000 Japanese and 10,000 Chinese. Convicts tackle the harder labor, and are paid for their work.

Expenses for this huge enterprise will probably touch the Y150,000,000 mark. Generators and other machinery for power plant and dam were supplied by the United States, Germany and Japan. Westinghouse and Otto Wolff were principal suppliers.

Hydro-electric generation will serve Kirin's light industry and chemical industry, and will feed cities as far afield as Harbin, Changchun, Mukden and Fushun. The dam will have a secondary use. An area of 176,000 acres along the lower reaches of the river, now waste land, will be irrigated by the artificial lake for cultivation of farm crops, including rice, while another 392,000 acres will be released from floods during the rainy season.

The foregoing figures, however, only partially describe the magnitude of the Kirin Dam. Foreign correspondents visited Kirin recently and were impressed. From high on a hillside, they were given a bird's-eye view of the operations below. The dam, which in its present stage resembles a vast skeleton of concrete and metal, crosses the Sungari between two sizeable hills. On it are thousands of workmen, ant-like in their activity. A temporary industrial town has sprung up in the valley. In addition to its power plant, it boasts a concrete mixing factory, toolsheds and hundreds of workmen's dwellings. The concrete mixing factory has its own railway to the dam-head.

Alcohol Replacing Gasoline In China

By H. B. NILES

INCREASED difficulties in transportation on China's south-western highways have stimulated the demand for alcohol to replace gasoline for motor vehicles. A large percentage of China's trucks, buses, and cars in the interior provinces are now running on alcohol or gasoline-alcohol mixtures. Pure gasoline, a luxury, is only enjoyed by the air force and the army.

British North Borneo, Dutch East Indies, United States, and the Soviet Union are the main suppliers of China's gasoline. In 1939, no less than 135,000,000 litres of gasoline valued at $24,760,000 were imported. Because of the outbreak of war in Europe, which increased the consumption of oil of the belligerent countries in Europe, the increasing difficulty to ship gasoline to China, and the high cost of gasoline, which must be paid for in foreign exchange, China is depending more and more upon other kinds of fuel.

Only recently, a well was successfully sunk in the North-west producing a limited amount of oil, which is refined and supplies some of the vehicles passing through that region. Its production is still more experimental than commercial. To meet the shortage of liquid fuel, the Chungking authorities have in recent years encouraged the use of alcohol or charcoal driven vehicles on its highways. In September, 1937, the government ordered that all motor vehicles, except those for military use, be required to use a gasoline-alcohol mixture instead of pure gasoline. At least 20 per cent, in volume of the fuel must be 98 per cent pure alcohol. This regulation was further tightened as the importation of gasoline became more and more difficult in the following years. The result is that most cars are now using alcohol.

To meet the rising demand for alcohol, sixteen government and private alcohol plants are at present in the South-west and at least four in the North-west, producing 95-99 per cent pure alcohol, a small portion of which is also sold for medical use. More plants are being built and planned.

The sixteen south-west plants are located in Szechuen, Hunan and Kwangsi, while the four factories in the north-west are found in Shensi and Kansu. They have a total investment of more than $22,000,000. Their production is usually booked months ahead. A plant in Shensi had a three months' order from the government even before its construction was completed.

Trial runs made by cars using alcohol indicate that this fuel is generally satisfactory. The difference in performance, between alcohol and pure gasoline is about 20 per cent but gasoline costs more than double the cost of alcohol. In cold weather, however, the performance of alcohol is not so satisfactory. Chinese chemists of the National Bureau of Industrial Research of the Ministry of Economic Affairs are experimenting with perfecting a device to make the performance of alcohol satisfactory under all weather conditions as well as to eliminate its corrosive elements.

Little information is available about the construction of these factories or their activities. Their exact locations are well guarded secrets. The following account about one of the alcohol distilleries serves to show the general situation. Situated at a place where coal is cheap and raw materials are plentiful, an alcohol factory is operating day and night near Kunming, Yunnan Province. Its product is known as natalite, a special name given to synthetic gasoline made from high-grade alcohol and ether, which is being used in large quantities both for highway and city transportation. This plant is especially important because it is located at the terminus of the Yunnan-Burma, the Yunnan-Kweichow and the Yunnan-Szechuen highways.

To supply the factory which abundant raw materials, the authorities are co-operating with the National Yunnan University in the development of a big experimental farm where sweet potatoes, millet, kaoliang, and white potatoes may be planted on a large scale. Starting from 1,000 *mow*, the farm may be extended to 10,000 *mow* later on. It is capitalized at $900,000 and is given technical assistance by the agricultural experts of the National Yunnan University. It will also grant loans to farmers engaged in producing raw materials for making synthetic gasoline.

In Szechuen, before the war, there were only three or four alcohol plants. But now, there are 14 distilleries. They are: the Tai Chen Alcohol Distillery, Kuo Min Alcohol Distillery, Hsin Min Alcohol Distillery, Fu Hsin Alcohol Distillery, Hsin Chen Alcohol Distillery, Hsin Li Alcohol Distillery, Szechuen Alcohol Distillery, Hsin Chung Kuo Alcohol Distillery, King Chwan Alcohol Distillery, Tze Chung Alcohol Distillery, Kwang Tai Alcohol Distillery, Tien Chen Alcohol Distillery, Min Li Alcohol Distillery and the Yin Chwan Alcohol Distillery.

Their aggregate capital, according to the *Central Bank of China Bulletin* is around $20,000,000 and their monthly production is put at around 150,000 gallons. The following table gives the capacity of production and the purity of alcohol of some of these distilleries:

	Percentage of purity	*Monthly Production*	*Price of Alcohol (per gallon)*
Hsin Chung Kuo ..	98	2,000	$16.00
Kuo Min	98	2,000	16.00
Tien Chen	95	2,000	14.60
Hsin Min	95	6,000	14.75
Hsin Chen	95	6,000	14.85
Kwang Tai	95	2,000	14.60
Tai Chen	95	4,000	14.60
Hsin Li	95	2,500	14.60

According to the government authorities, the interior provinces produced a total of 600,000 gallons of alcohol per month, in the early part of 1941 and in the latter part of the same year, the monthly production will be increased to 1,200,000 gallons per month.

LaPlant-Choate Company's Circular

LaPlant-Choate Manufacturing Co., Inc. has just issued five new circulars, each 16 pages in two colors.

Form No. A-110-636 describes each of the products manufactured by the Company. Sections are devoted to land clearing, earth moving, and snow removal equipment. Each product is illustrated and a short description of its uses included.

Form No. A-111-637 describes the PaPlant-Choate Hydraulic Trailbuilder. It is profusely illustrated and describes in detail the simple hydraulic controls, down pressure and positive lock, the interchangeability of tools, the extra values built into the equipment, and the Caterpillar Tractor Co.—LaPlant-Choate Manufacturing Co., Inc. distributor organization.

Form No. A-112-638 describes the LaPlant-Choate Hydraulic Bulldozer. It also is profusely illustrated, and includes complete information on the simple hydraulic controls, down pressure and positive lock, tool interchangeability, correct design and balance, and the world-wide sales and service organization.

Form No. A-113-639 is a booklet on the LaPlant-Choate Hydraulic "Carrimor" Scrapers, which range in size from 2.9 to 8.2 cubic yards. Photographs and complete details are given on the hydraulic controls, on the correct design of the bowl and cutting edge, the exclusive features, international sales and service facilities, and a short description of the Forced Ejection "Carrimor" Scrapers.

Form No. A-115-641 is a circular on the LaPlant-Choate Forced Ejection "Carrimor" Scrapers. These scrapers range in size from from 12 to 33 cubic yards heaped measure. Included is a comparison between the LaPlant-Choate design and conventional design. Construction features, and facts and figures on yardages along with numerous illustrations make this booklet interesting. A short description of the Hydraulic "Carrimor" is included.

Electricity in the Paper Mill

By F. R. MASON, B.Sc. (Tech.)

The growth of the application of electricity in the paper trade is well illustrated by a comparison of the Reports on the Census of Production published by H.M. Stationery Office. The curve shown in Fig. 1 is based on figures extracted from these reports.

In view of the very special requirements of the paper industry, and the lack of general contact between electrical designers and paper makers in general, it is a striking tribute to the versatility of paper mill executives and engineers that the extensive adoption of electrification which is indicated could have taken place with such rapidity. It is in this field that the Technical Section of the Paper Makers' Association is serving a very valuable function, as it not only provides a medium for the dissemination of knowledge among paper makers but also gives to those electrical engineers who avail themselves of its meetings and discussions an insight into the problems of paper making which otherwise would be almost impossible of attainment.

In dealing with many aspects of paper mill electrification, it is often an advantage to consider the problem from a purely mechanical point of view. In the majority of applications electricity is used only as a means of transmitting power between a mechanical prime mover and a mechanical machine. We therefore arrive at the first very obvious conclusion, that the nearer the prime mover is to the machine to be driven the stronger will be the case for a purely mechanical transmission.

The case for mechanical transmission in such instances is further strengthened when the transmission losses are considered. Speaking broadly, the conversion of mechanical power into electrical energy involves a loss of about five per cent, while its reconversion to mechanical energy is subject to a further loss of about ten per cent. These losses remain constant whatever the distance the prime mover is from the point of power application. Electrical transmission losses are relatively negligible in paper mills of normal layout and design. In the case of mechanical transmission the exact opposite applies; the losses increase with the distance the power is transmitted.

Almost every piece of electrical apparatus used in a paper mill has its mechanical counterpart. For example, just as a simple lineshaft under load may twist in transmitting power from one end to the other, but will not slip, so a synchronous motor will rotate in step with the alternator supplying it: there will be a relative angular displacement between the rotors of the alternator and the motor depending on the load, but the revolutions will always correspond. But just as a belt drive is always subject to slip, the amount of which depends upon the load, so an induction motor and a shunt wound D.C. motor lose speed as the load is increased.

So also a reduction gear may be replaced by a generator and motor, the positive type of gear finding its analogy in synchronous equipment and the friction drive in squirrel-cage, slipring and shunt D.C. motors. When variable speed gears are considered, the analogy still holds good. A simple variable speed gear often used for reel drives is provided by a slipping clutch. With the clutch fully home the efficiency is good, but as slipping is allowed to take place the efficiency falls away in proportion to the surplus energy being dissipated in the form of heat. A variable speed slipring motor with rotor resistance control has exactly the same characteristics. It is quite apparent therefore why neither form of variable speed device is used where inherent close regulation of speed is required or where large powers are involved. Both schemes have, however, the virtue of simplicity. There are on the market a number of variable speed gears incorporating some form of V-belt running between expanding pulleys. These give a variable ratio for limited speeds and powers. A shunt control D.C. motor or an A.C. commutator motor have similar characteristics, excepting that the range of power is, from a paper mill point of view, unlimited.

If two of these variable speed gears were operated in series the speed range would be increased very considerably. The electrical analogy in this case is provided by Ward-Leonard or buck and boost control, but again with this difference that the range of power is practically unlimited.

This brings us to another conclusion, that for variable speed drives from a constant speed prime mover electricity has wider scope than any existing form of mechanical drive.

The control of power is again subject to analogy between electrical and mechanical devices. The friction clutch, the hydraulic coupling, and the belt drive with fast and loose pulleys form the basis of the majority of mechanical power control devices. The actual operation of the control is generally immediately adjacent to the control unit itself, but mechanical remote control can often be arranged to a limited degree by means of rods, wires, chains, etc. With power transmitted electrically, the control device, i.e., the switch, can easily be located in any desired position with relation to the motor and the source of power. It is clear, therefore, that in the matter of control electricity has a great advantage over mechanical devices.

Supply conditions of voltage and current are also subject to mechanical analogy. If we take a lineshaft of given dimensions it will transmit with safety a certain definite torque. By increasing the speed of the shaft the power transmitting capacity of the shaft will be increased *pro rata*. Similarly, a length of cable of fixed dimensions will carry a definite current. By increasing the voltage the power transmitting capacity of that cable will again be increased *pro rata*. With both mechanical and electrical transmission it may therefore be concluded that the capital cost of power transmitting equipment can be reduced by high speeds and high voltages. This remark must, however, be taken with the qualification that in both cases the advantage has an upper limit, due to other considerations, for any particular installation.

In a D.C. transmission system the power transmitted depends on two factors only, voltage and current, in exactly the same way as the power transmitted through a hydraulic main depends on the pressure and quantity of the water.

In an A.C. system, however, where the current and voltage are not continuous but oscillating

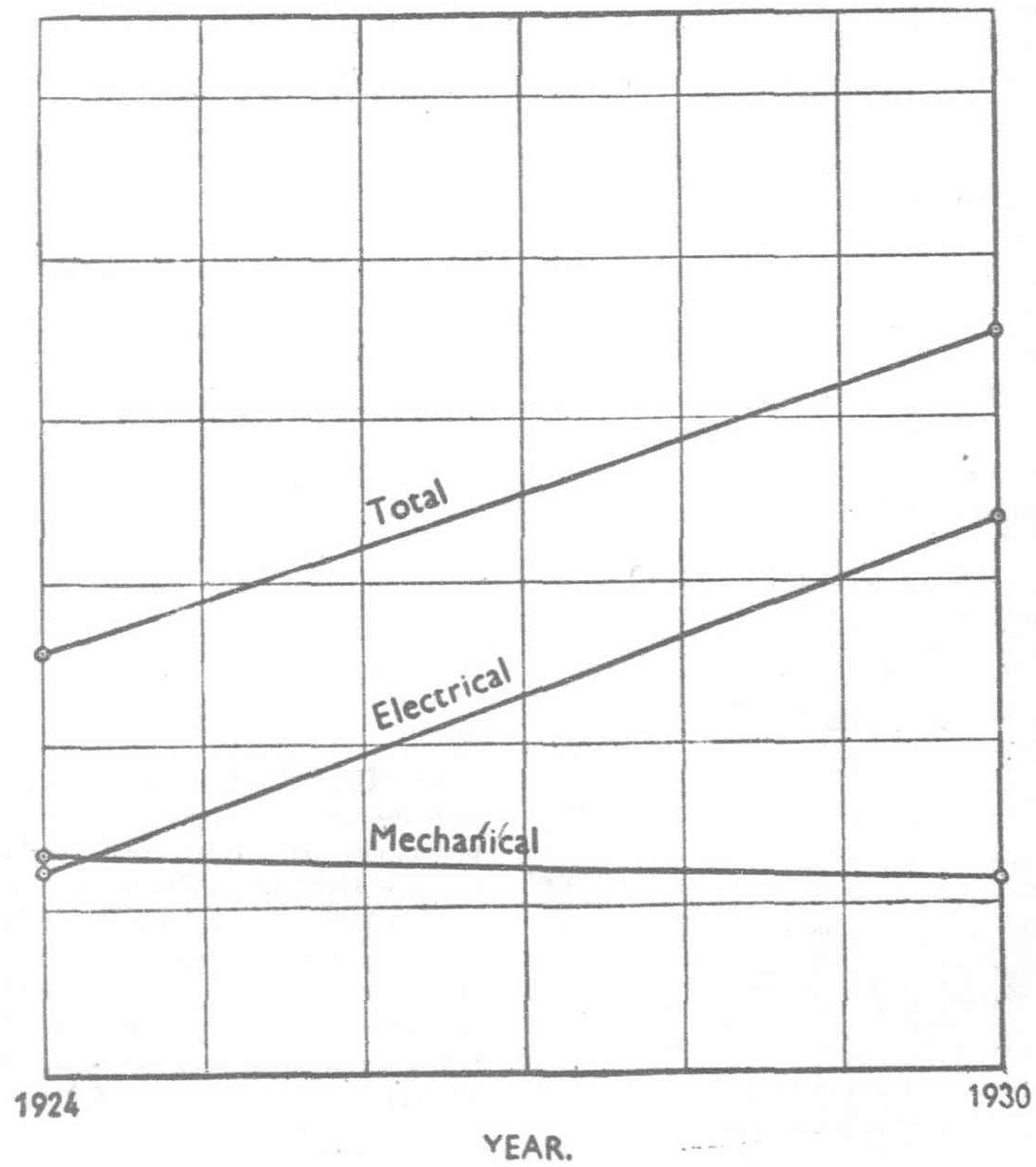


Fig. 1.—Curve showing growth of the use of electricity in the paper industry

somewhat in the same way as the piston of a reciprocating steam engine, a third factor is involved about which there is still much confused thinking in non-electrical circles. This is the power factor.

It is a rather unfortunate property of A.C. systems that the current and voltage waves are liable to get out of step. As in the case of water flow through a pipe where flow without pressure or pressure without flow would be equally incapable of developing power, so in an A.C. system if the voltage and current impulses or waves are completely out of step no power can be developed and the power factor is then said to be zero. Conversely, if the voltage and current waves are in exact synchronism the power which can be developed is at a maximum and the power factor is said to be unity. Intermediate power factors give a measure of the synchronism of the current and voltage waves, and consequently a measure of the power which can be developed by a given current and voltage. It is vitally important that no confusion should arise between power factor and efficiency.

If the steam turbine had not been invented it is doubtful if to-day we should see the widespread use of electricity which we do in the paper trade. The turbine is essentially a very high speed machine, lending itself admirably to the driving of electrical generators, but presenting a more serious problem when applied to slow speed mechanical drives. The inherent economical advantages of the turbine together with the process steam demand in a paper mill made its widespread use inevitable. The use of electric power transmission made it possible to eliminate small and relatively inefficient prime movers from the mill and concentrate the whole load on one large and efficient unit. It is true that electricity has other advantages particularly in the matter of ease of control, cleanliness, and steadiness of drive. But it is more than doubtful if the paper industry would have spent the vast sums they undoubtedly have to secure these advantages alone.

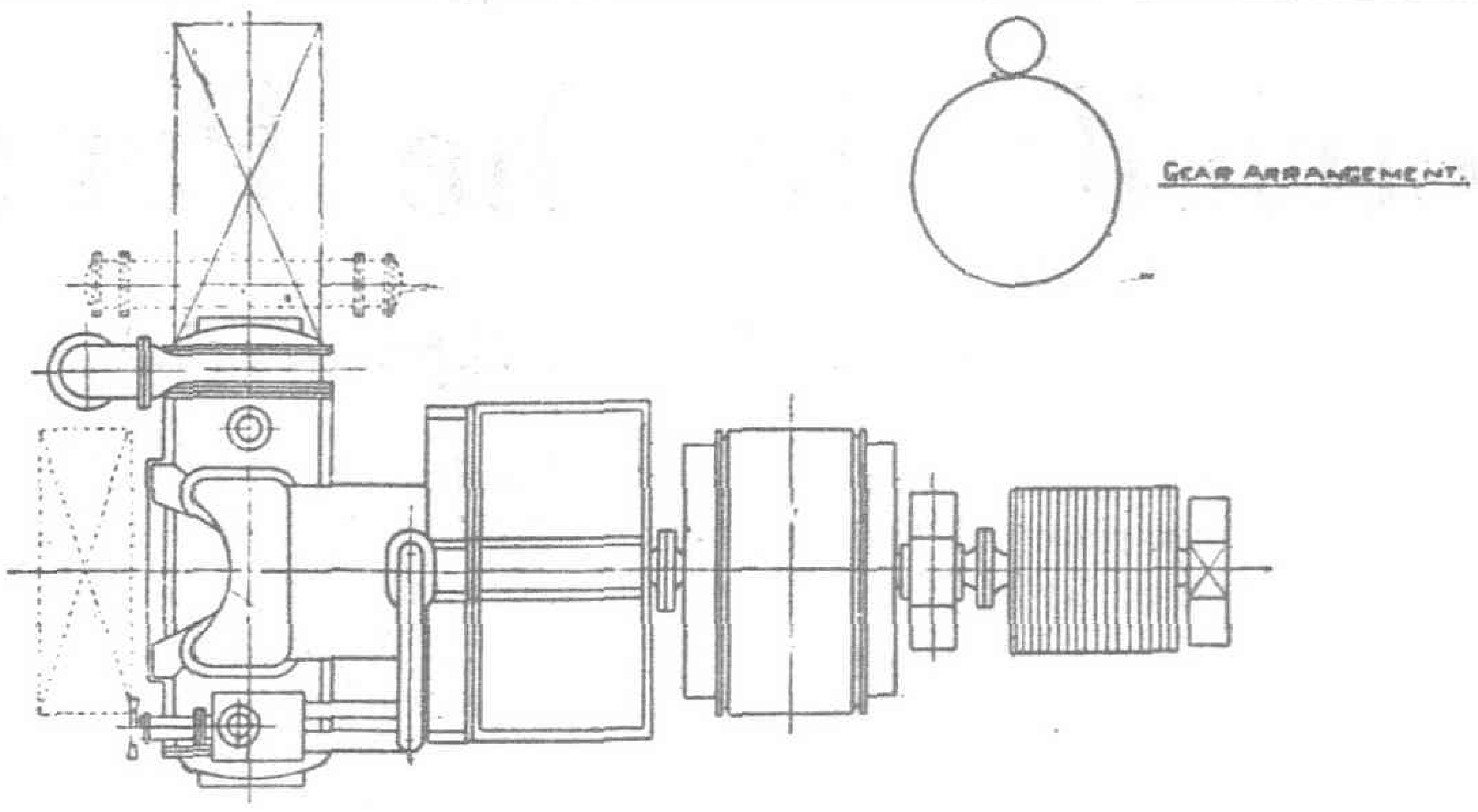


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Fig. 2.—This is a scheme in which the alternator and rope pulley run at the same speed, being driven through a single reduction gear.

A top pinion gear is shown, but a side pinion type of box would be considered if the conditions demanded. The auxiliaries may be rope or separately driven, depending on the conditions.

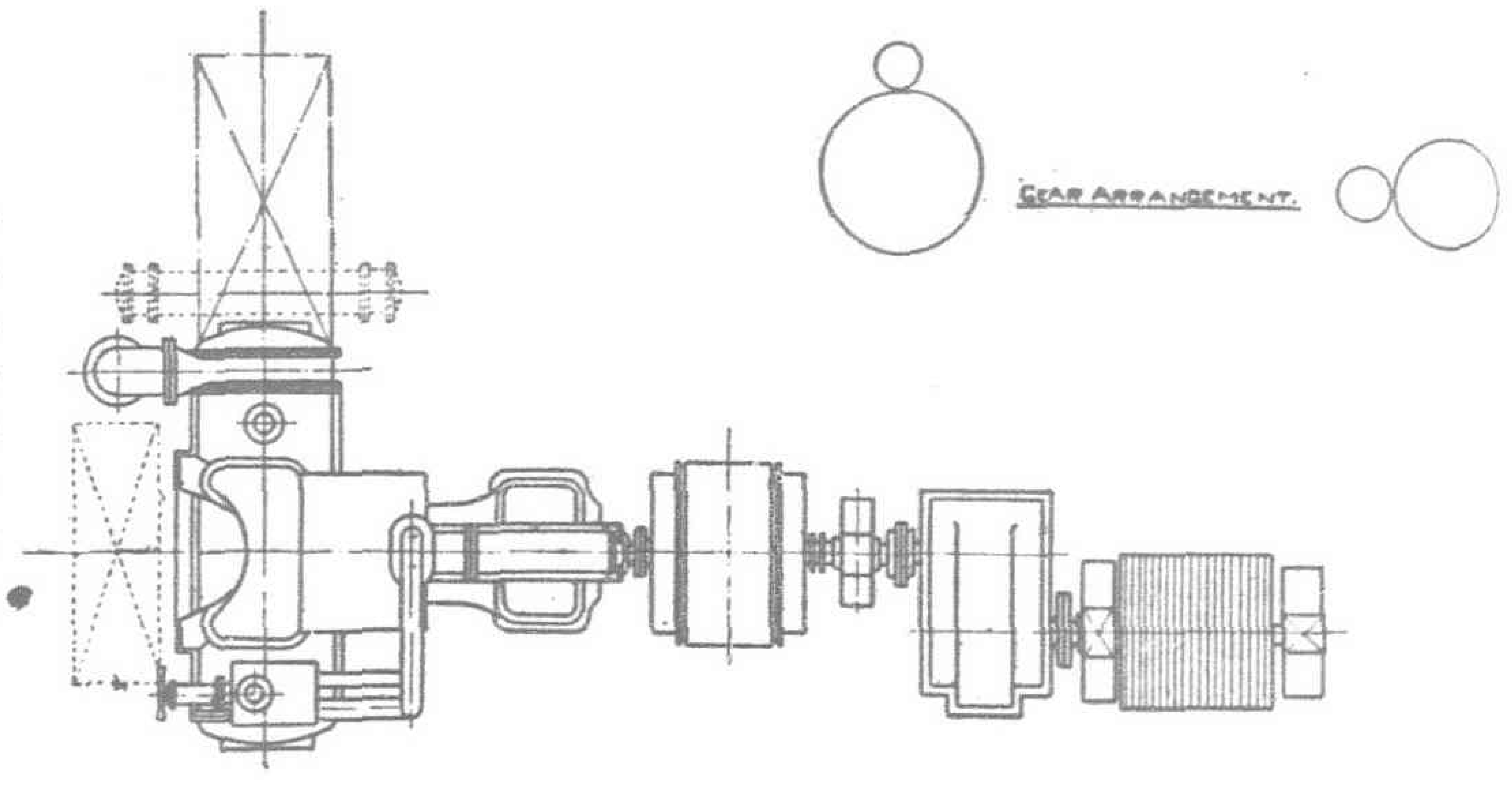

Fig. 3.—This arrangement utilises a standard C.H. Turbine and gear unit, driving the alternator at 1,000 r.p.m. A second reduction gear transmits the power from the outboard end of the generator to the rope pulley. The auxiliaries may be driven either separately or by the rope from the main pulley, depending on the conditions.

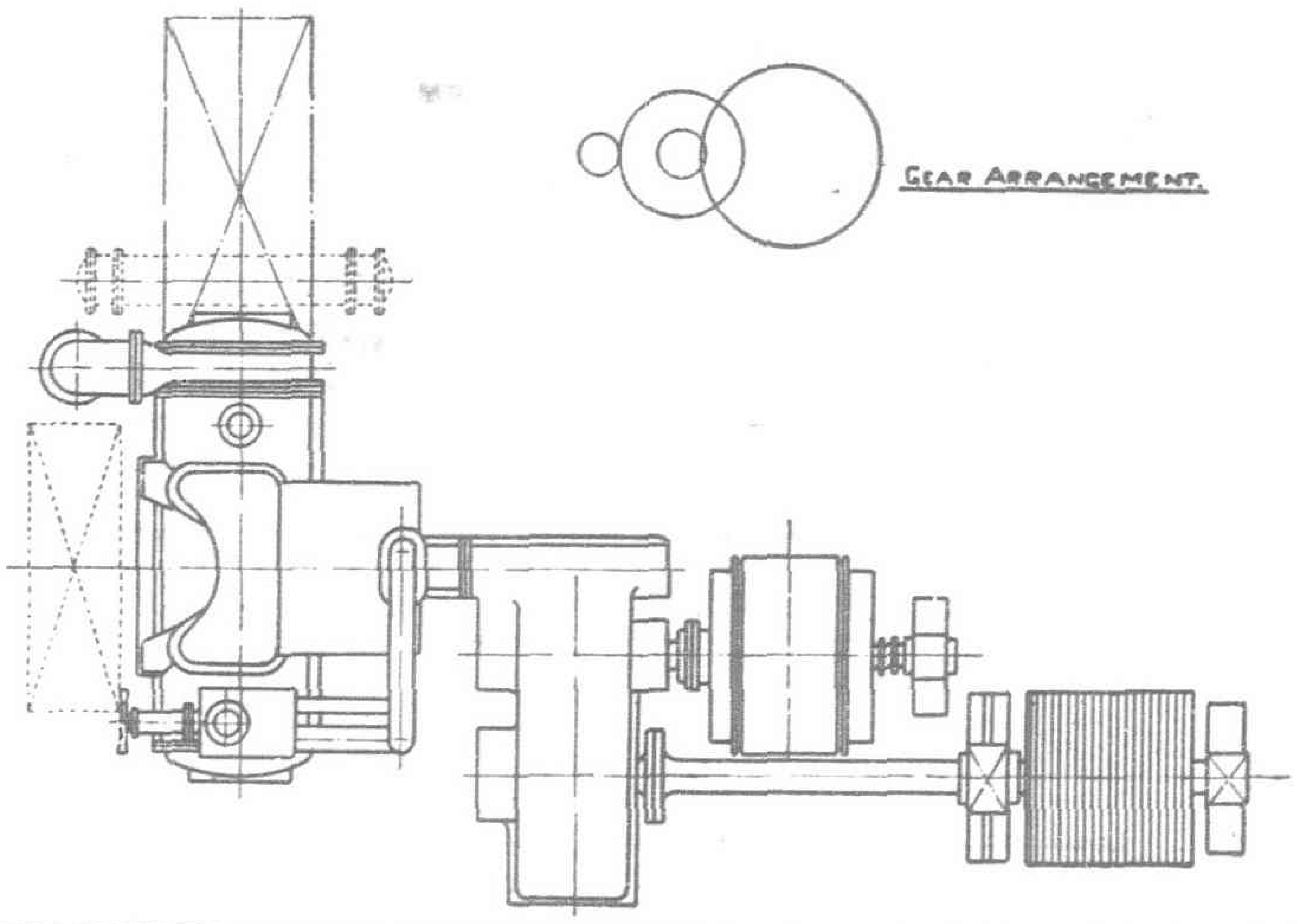

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Fig. 4.—A double reduction gear with the intermediate shaft running at 1,000 r.p.m. is shown incorporated in the above. The alternator is driven by the intermediate shaft and the rope pulley from the slow speed shaft.

The auxiliaries may be rope or separately driven according to the conditions.

There is, however, a case for a partial mechanical drive in certain instances. These cases are generally found in the smaller mills. If the beater house is reasonably near to the turbine room and the beaters are arranged for group drive, as is generally the case in the older mills, it often proves advantageous to drive the beaters from the turbine through mechanical gearing.

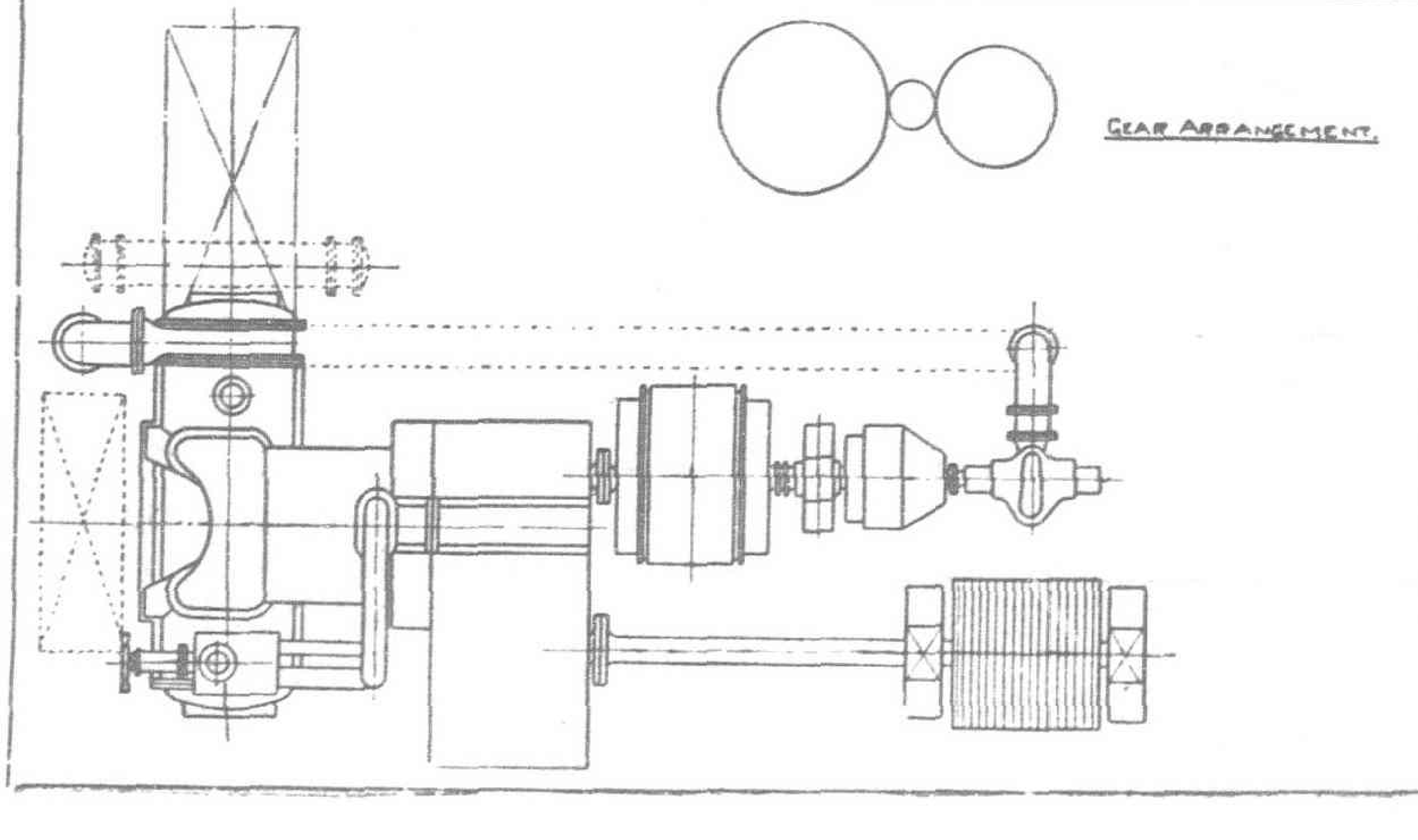

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Fig. 5.—This scheme makes use of a gear with two wheels driven by a common pinion, disposed between them. One of the slow speed shafts drives the alternator at 1,000 r.p.m. and the other drives the rope pulley. The auxiliaries may be driven direct from an extension of the alternator spindle, by rope from the pulley, or separately as the conditions demand.

Quite the reverse applies in the case of a mill taking power from the public supply authority. Here the beaters will generally be found to be electrified, but there is a case for the retention of the mechanical drive of the paper machines using a back pressure steam engine for the purpose.

The Generation of Electricity

It is not proposed in this paper to deal with the prime mover itself, as several papers have been read before this

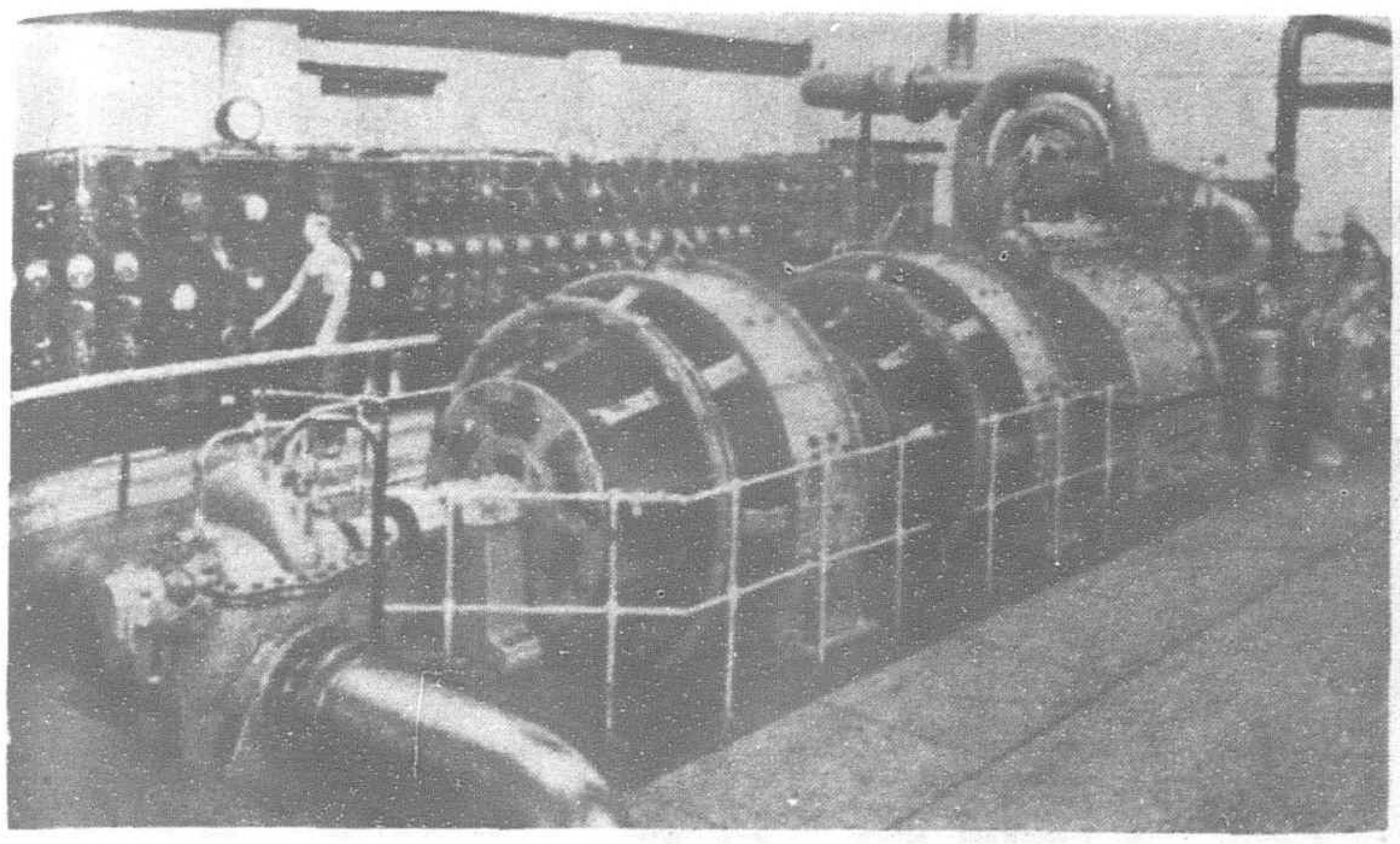

Fig. 6.—A 2,500 kw. double pass-out turbo generator installed at Messrs. Reed and Smith's Paper Mill

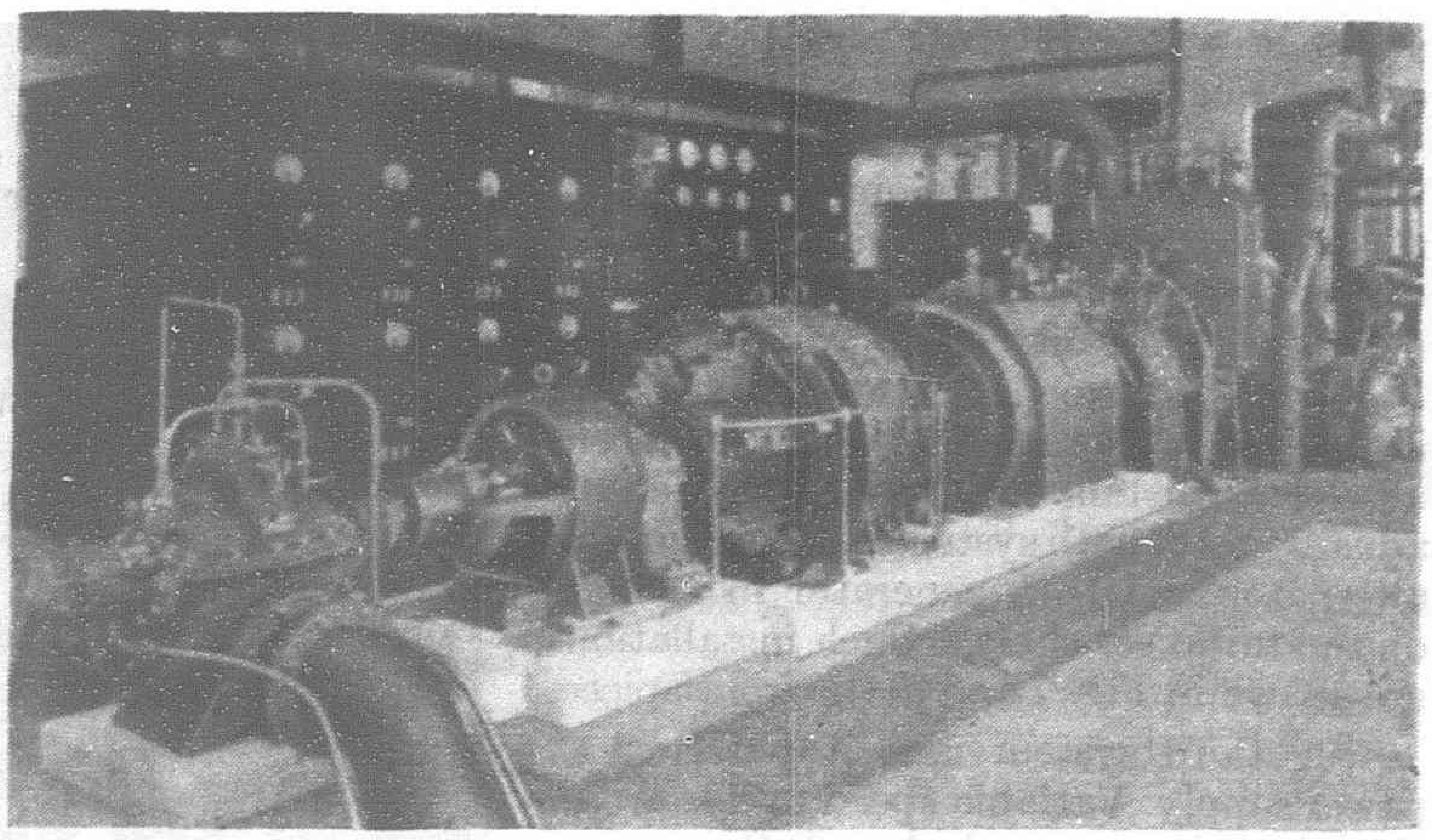

Fig. 7.—A 1,900 kw. pass-out turbo set installed at Messrs. Wiggins Teape, Buckland Paper Mill

section on the subject of steam turbines. The generating equipment proper must, however, receive consideration.

In the vast majority of paper mills private power plant is installed. The drive may be purely mechanical, this arrangement generally being found in the older mills ; it may be part mechanical and part electrical, this type of equipment often finding favor in small and medium size mills ; or it may be an all-electric installation, which is the scheme generally adopted in all modern mills. It is with the last two schemes that we are concerned in this paper.

Taking the part-mechanical part-electrical scheme first. If such a scheme is adopted it is almost universally the practice to use individual electric drive for the paper machines and finishing plant and mechanical drive for the preparatory plant. The explanation for this is the fact that variable speed drives are generally required in the two former sections, and furthermore the layout of the plant is such that group driving is not easily arranged. Individual drive by electric motor has therefore obvious advantages.

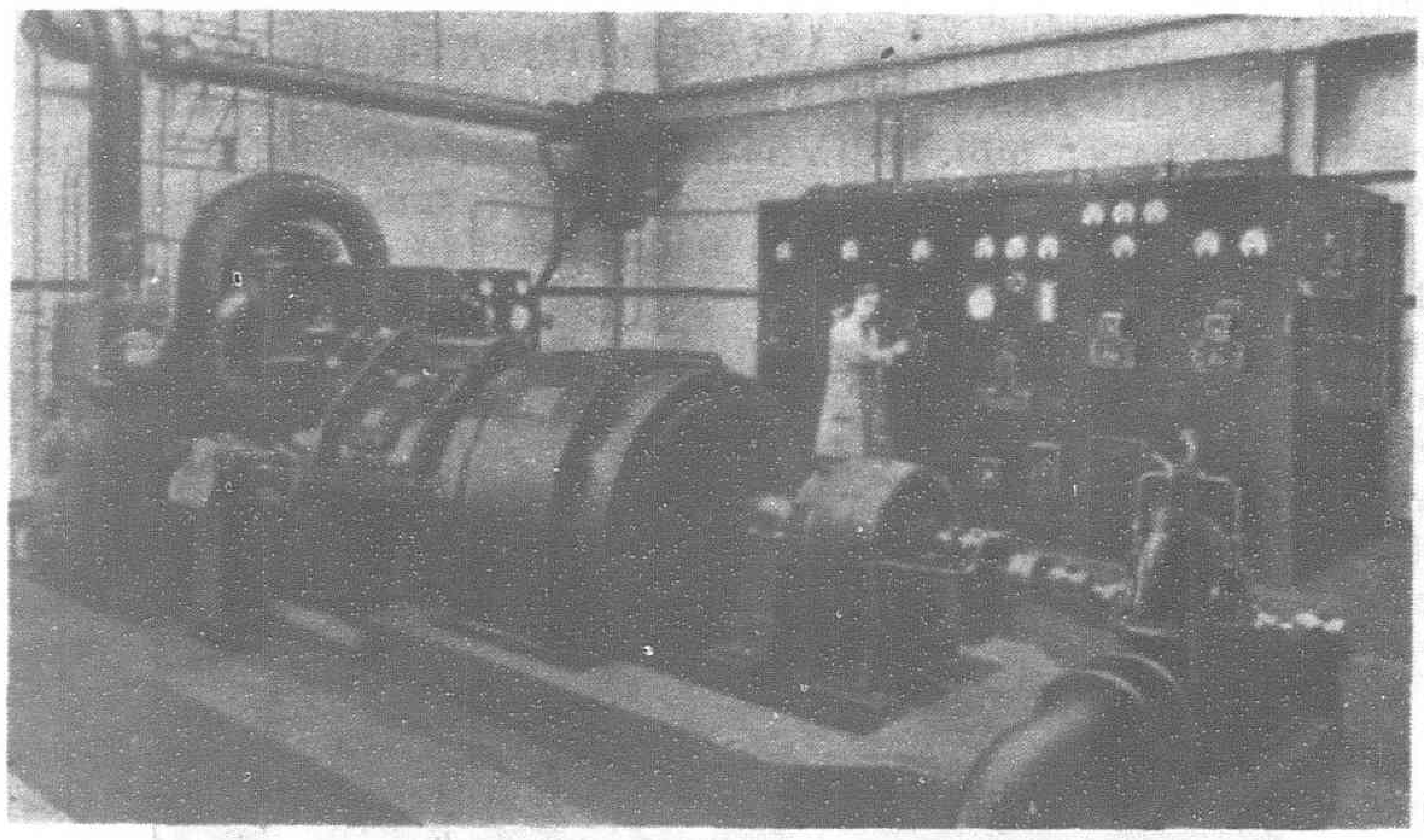

Fig. 9.—A 1,000 kw. pass-out turbo alternator set installed at John Wild's Paper Mill

Turning to the preparatory department, however, we find that the conditions are considerably modified. The plant, notably in the beater house, is generally symmetrically arranged and has a constant speed characteristic. This condition is favorable for mechanical drive.

In a few mills the electrical and mechanical drives are entirely separate, two independent prime movers being installed. On the score of efficiency and cost this arrangement has little to recommend it as, other things being equal, two small prime movers are more costly and less efficient than one large one. The prime difficulty with many combined drives utilizing single prime movers is, however, one of operation. If a belt or rope breaks in the beater house it may be necessary to shut down the whole mill before that belt can be replaced. This is a very serious disadvantage from the production point of view. The problem has been solved in several recent paper mill installations by interposing a hydraulic or friction clutch in the mechanical portion of the drive, specially adapted to prop and pick up the mechanical load without stopping the electrical equipment. Both the friction clutch and the hydraulic coupling correctly designed and applied have proved perfectly satisfactory for this purpose. The prime factor in heavy clutch drives of this type and one which is often overlooked is heat storage capacity. A clutch may be perfectly designed as regards frictional surfaces and spring pressures, but if the clutch body is incapable of storing without undue temperature rise the whole of the heat generated during engagement against load, the clutch will burn out. The various methods of combining a mechanical and electrical drive are shown in Figs. 2, 3, 4 and 5.

The all-electric drive is subject to as many variations as the composite scheme. It has been said that for variable speed work D.C. has many advantages. For this reason many mills have

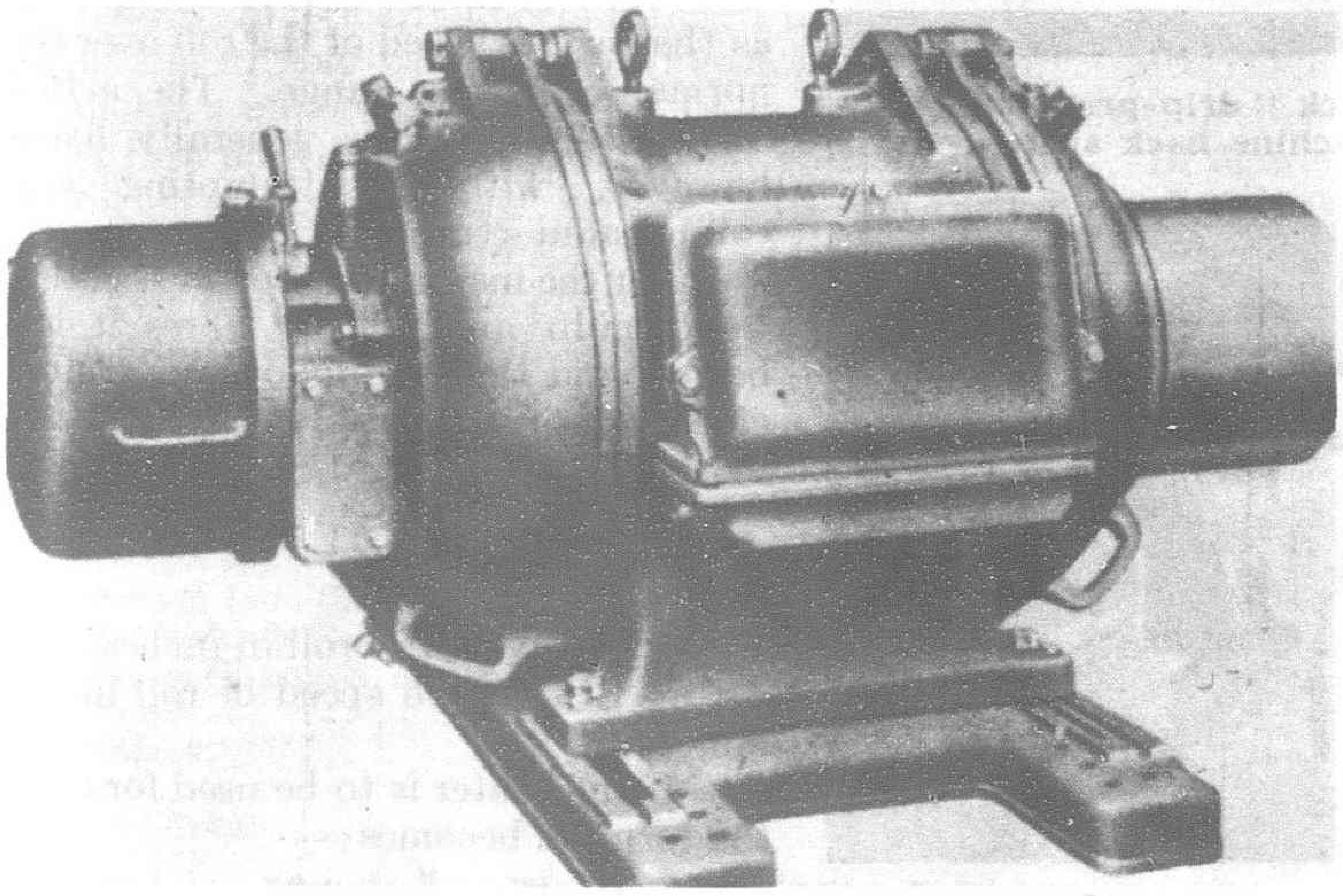

Fig. 10.—A Metrovick totally-enclosed fan-cooled motor

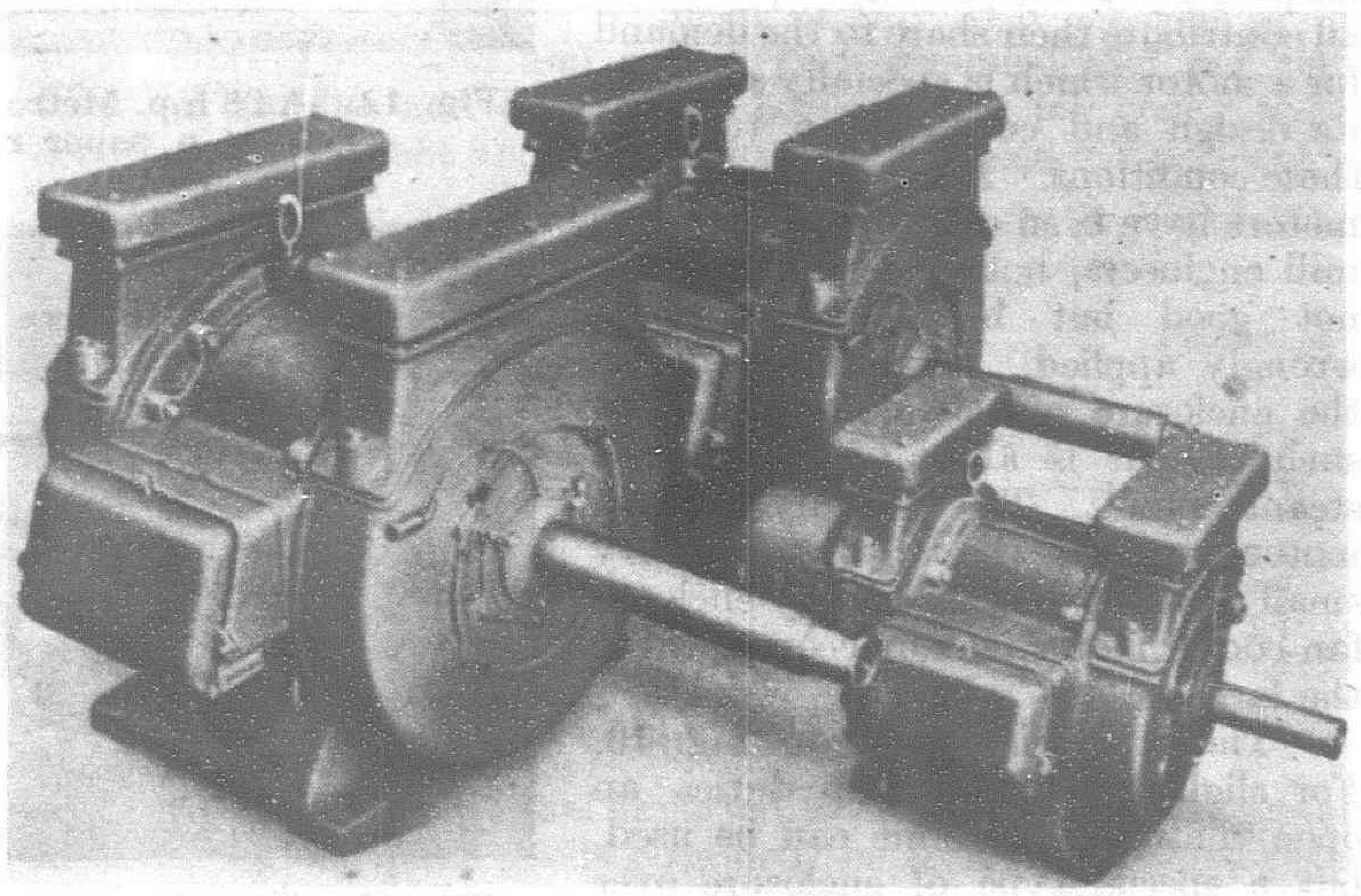

Fig. 11.—Metrovick "hose-proof" motors for Paper Mill application

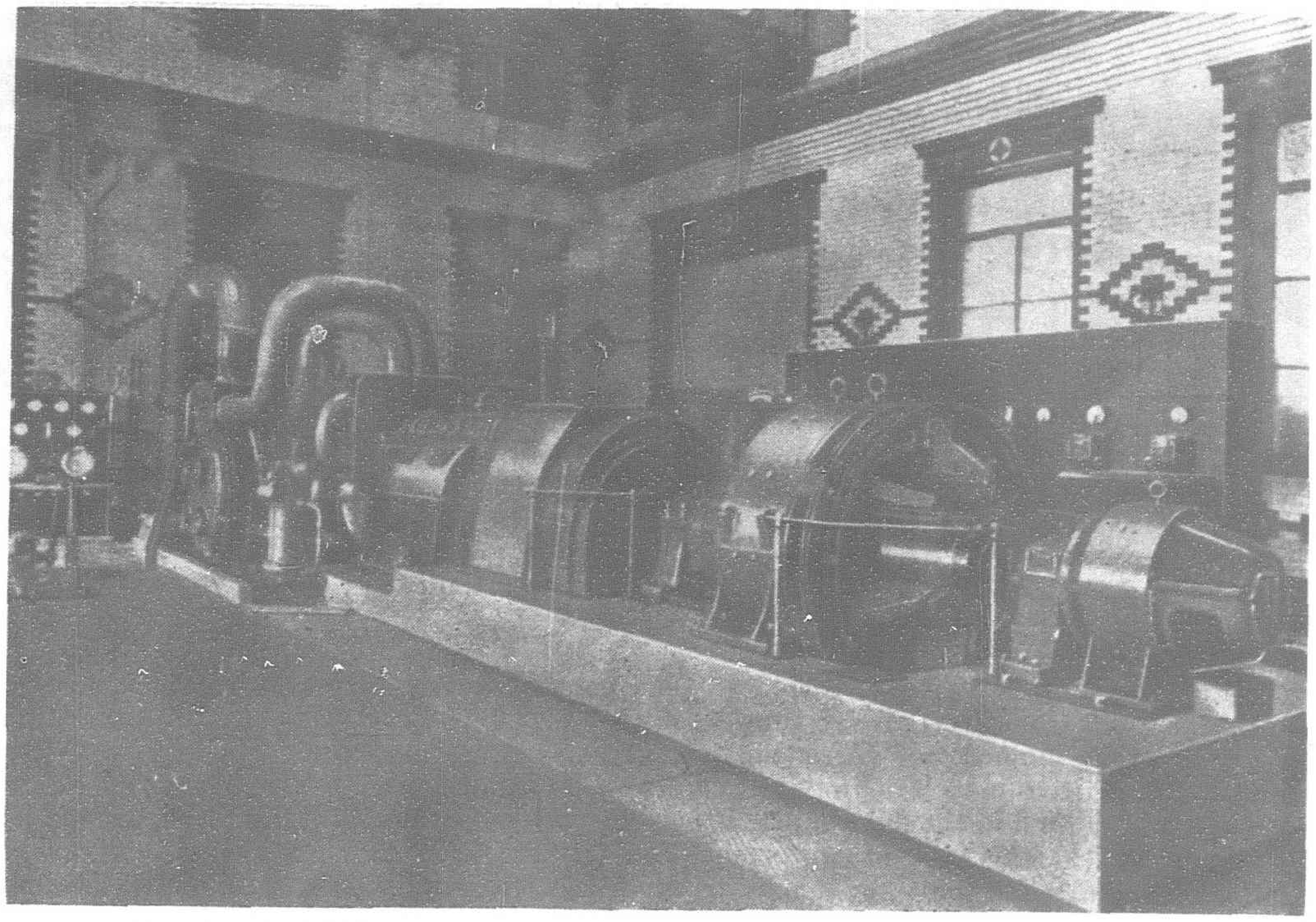

Fig. 8.—A 3,200 pass-out turbo set installed at the Darwen Paper Mill

adopted a purely D.C. system for all drives. Such an installation is shown in Fig. 6. This system has the advantage that the same type of equipment is used throughout the mill. It suffers from the disadvantage that D.C. motors must be used for constant speed duties which could be performed by the simpler A.C. induction motor. A number of recent all-electric installations have combined the advantages of both systems by arranging an alternator and D.C. generator in tandem on the turbo set shaft. Such installations are shown in Fig. 7 and in the frontispiece.

A third system uses a purely A.C. power supply. Variable speed drives are in this instance served by D.C. motors supplied with power from motor-generating sets, or the A.C. variable speed commutator motor can be applied direct. The generating plant at a mill operating in this manner just outside Manchester is shown in Fig. 9.

Each of the foregoing systems of power generation has its own advantages and disadvantages, and no general ruling can be given, as each mill has its own special problems which must be met in the best way considering local conditions. A point often raised, however, concerns the relative merits of A.C. *versus* D.C. The question should not arise in this form; each has its own special sphere of usefulness in the paper mill. A.C. is undoubtedly more satisfactory for constant speed drives. D.C. has strong claims for variable speed drives. Therefore a case can almost invariably be made for both in any normal paper mill. The development of the A.C. commutator motor and its successful application in a number of mills to variable speed work has put D.C. on its mettle. Nevertheless, the sphere of usefulness of each is generally quite determinate when local conditions are investigated.

Requirements of Paper Mill Drives

While the conditions applying to the operation of the generating plant in a paper mill are in many respects very easy and demand little more than efficiency and reliability, the duties of the motors are as arduous as any found in industry. Problems of heat, water, steam, chemicals, heavy starting torques, overloads, the vital necessity of keeping going, and ruthless operatives, all contribute their share to the demand for a motor which is specially suited in its design and construction to meet these conditions. Many perfectly good motors have been condemned by paper mill engineers, not because they were not good but because they were wrongly applied. For certain duties the enclosure of the motor must be such that it is absolutely water and steam proof. The totally-enclosed motor provides the answer for very small ratings while the totally-enclosed fan-cooled motor is more economical in the larger sizes.

The latter is shown in Fig. 10. For slightly less stringent duties an open ventilated machine can be used, but a special type of enclosure over the air inlet and outlet parts must be adopted. Such a motor is shown in Fig. 11. This type of enclosure is generally known as hose-proof.

Further down the scale we come to the drip-proof motor which, as its name suggests, is suitable for situations where drippings, e.g., from roof condensation, are liable to occur. This type of motor is illustrated in Fig. 12.

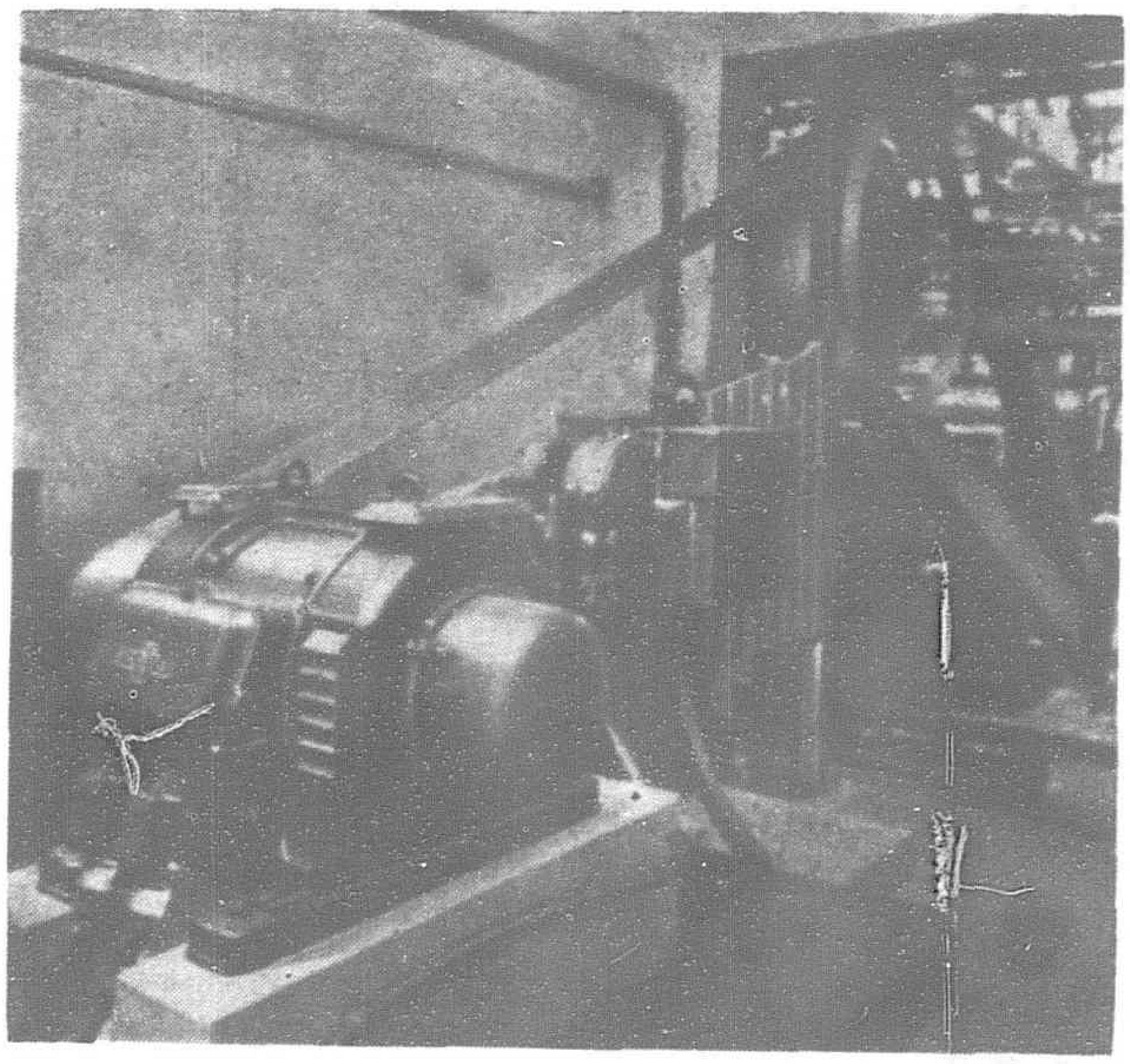

Fig. 12.—A 35 h.p. Metrovick "drip-proof" motor driving a paper machine back shaft

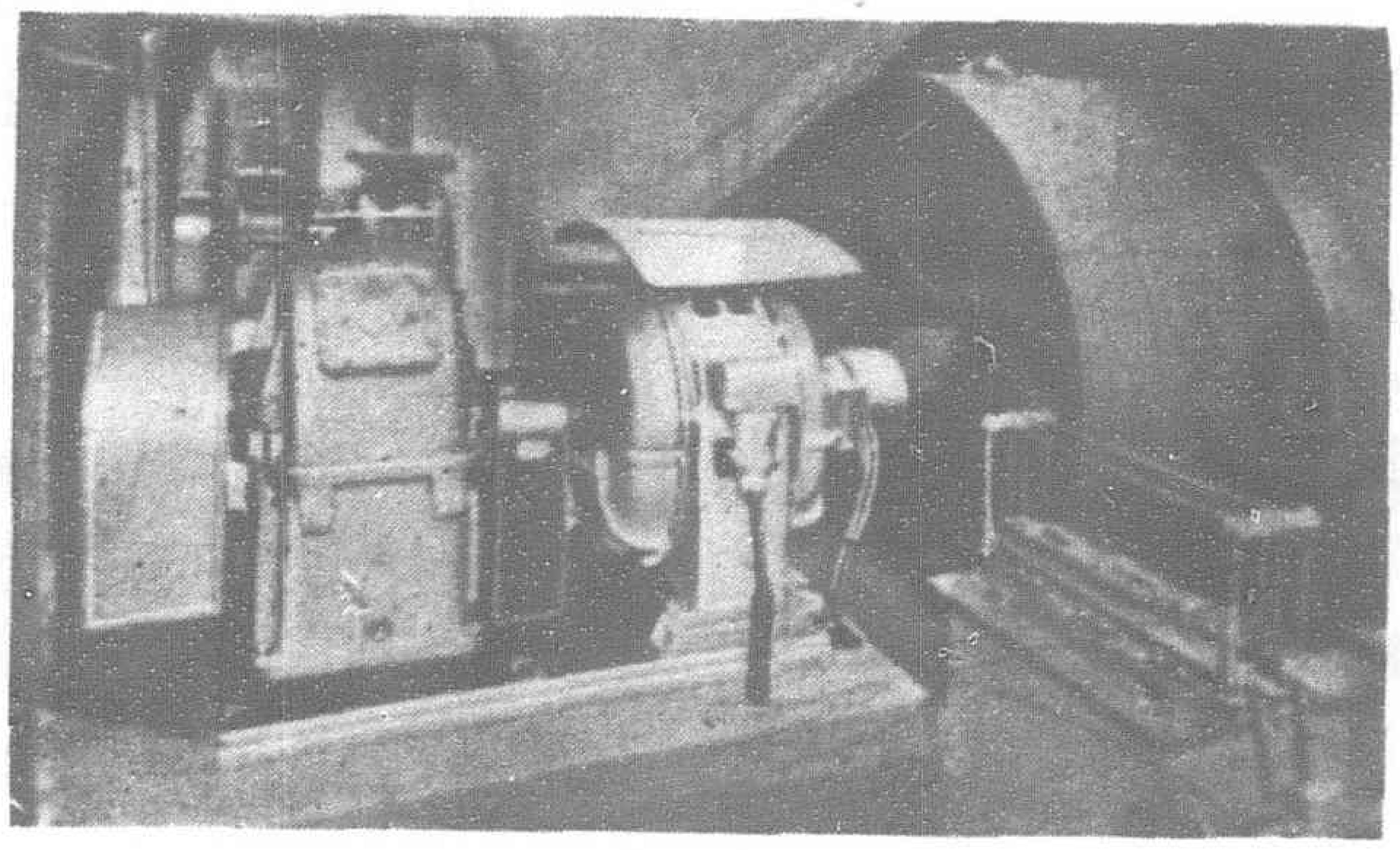

Fig. 13.—Two Metrovick 800 h.p. AIF induction motors driving beaters. The 15-in. rope pulley which formerly drove the beaters on right

Finlly, as far as paper mill work is concerned, we have the screen protected motor which can be used only where water is not liable to be a source of danger.

Any of the foregoing methods of enclosure can be applied to the various types of A.C. and D.C. motor.

As regards the types of motors used, this question is probably better dealt with in relation to each piece of apparatus.

Drives in Preparatory Department

The Hollander beater presents a straightforward problem provided the conditions are known and understood. The power absorbed can be analysed into its three components—bearing loss, circulating loss and beating tackle loss. Each of these losses varies directly as the surface speed of the roll over the normal operating range. The actual size of the motor is generally fixed, however, without attempting any complicated synthesis.

For the majority of beaters beating wood pulp and similar fibres it has been found that the following formula gives a fairly reliable figure for the motor rating:—

$$P = W \times \frac{S}{1750} \times 1.50$$

Where P=Motor h.p.
W=Width of roll in inches.
S=Surface speed of roll in ft./minute.

If the beater is to be used for rags, the formula becomes:—

$$P = W \times \frac{S}{1750} \times 2.25.$$

(To be continued)

SHANGHAI—Market-Place of the Orient

Foreign Trade—Finance—Industries—Commodities—Living Costs

Foreign Trade

IN May, 1941, Shanghai imported 26,536,000 customs gold units of goods or a decrease of 7,487,000 customs gold units when compared with April. During the same month, Shanghai exported 197,946,000 customs gold units of native products or an increase of 13,501,000 when compared with April.

When calculated in pound sterling, Shanghai's imports for May were £4,380,409 or a decrease of 23.4 per pent when compared with April and Shanghai's exports were £2,702,774 or an increase of 9.3 per cent. The excess of imports over exports in May was therefore £1,667,635 as against that of £3,245,558 for April. In the first five months of the year, Shanghai's imports totaled £20,373,918 and Shanghai's exports totaled £10,792,619. When compared with the corresponding period of 1940, Shanghai's imports this year dropped by £1,311,255 while Shanghai's exports increased by £1,745,582. The excess of import over export in the five month period was £9,581,299 as against £12,638,136 for the corresponding period of 1940.

The following table gives the details of Shanghai's foreign trade in figures:

	May, 1941	*April, 1941*	*May, 1940*
Imports	£4,380,409	£5,719,236	£5,291,100
Exports	2,702,774	2,437,678	2,391,276
Total	£7,083,183	£8,192,914	£7,682,376
Excess of Import over Export	£1,677,635 (Exchange rate of $3\frac{9}{32}$d.)	£3,245,558 (Exchange rate of $3\frac{7}{32}$d.)	£2,899,824 (Exchange rate of $3\frac{25}{32}$d.)

	January to May, 1941	*January to May, 1940*
Imports	£20,373,918	£21,685,173
Exports	10,792,619	9,017,037
Total	£31,166,537	£30,732,210
Excess of Import over Export	£ 9,581,299 (Exchange rate of 3.325d.)	£12,638,136 (Exchange rate of 4,2125d.)

America occupied the first position in Shanghai's import trade in the month of May. In this connection, it may be recalled that in April, America held only the third place in Shanghai's foreign trade. American imports in April was 19.6 per cent while American imports in May was 27.6 per cent of the total imports in the month. In figures, American imports in April were 6,618,000 customs gold units and in May were 7,328,000 customs gold units. Meanwhile, Shanghai's imports from British India (including Burma) dropped from first position in April to second position in May. In figures, Shanghai's imports from British India in April were 7,018,000 customs gold units and in May were 5,148,000 customs gold units.

The following table gives the positions of different trading countries in Shanghai's foreign trade for May, 1941:

	Value of Imports (000 omitted)	*Percentage*
The U.S.A.	7,328 customs gold units	27.6
British India (Burma)	5,148	19.4
French Indo-China	2,542	9.6
Netherlands East Indies	2,404	9.0
Japan (Formosa and Korea)	2,185	8.2
Brazil	1,314	5.0
Others	5,615	21.2
Total	26,536	100.0

However for the first five months of 1941, British India occupied the first place in Shanghai's import trade with America occupying the second and French Indo-China third, as shown in the following table:

	Value of Imports (000 omitted)	*Percentage*
British India (Burma)	26,248	21.1
U.S.A.	22,787	18.3
French Indo-China	20,153	16.3
Japan (Formosa and Korea)	10,966	8.8
Netherlands East Indies	10,186	8.2
Brazil	4,863	3.9
Other countries	29,027	23.4
Total	124,230	100.0

As to Shanghai's exports, America held the first place in May, occupying 24.4 per cent of the exports to all countries. The following table gives the position of the trading countries in Shanghai's export trade in May:

	Value of Exports (000 omitted)	*Percentage*
U.S.A.	$48,228	24.4
Hongkong	32,267	16.3
Kwantung Leased Area	29,077	14.7
British India (Burma)	17,688	8.9
Netherlands East Indies	13,727	6.9
Japan (Formosa and Korea)	11,558	5.8
Other countries	45,401	23.0
Total	197,946	100.0

The position of the different trading countries in Shanghai's export trade for the first five months of the year remained unchanged as shown in the following table:

	Value of Exports (000 omitted)	*Percentage*
U.S.A.	$199,650	26.5
Hongkong	129,235	16.5
Kwantung Leased Area	86,791	11.0
British India (Burma)	67,627	8.6
Japan (Formosa and Korea)	64,814	8.3
Netherlands East Indies	43,120	5.5
Other countries	192,840	24.6
Total	$783,077	100.0

In May, the most important items of imports were still foodstuffs. However, total import of foodstuffs in May dropped by 1,176,000 customs gold units when compared with April. The next important item of import was cotton and cotton yarn, which dropped by 2,368,000 customs gold units when compared with April. The value of sugar imported increased from 950,000 customs gold units in April to 1,158,000 customs gold units in May. The total imports of foodstuffs occupied in May 34.5 per cent of the total imports. Cotton and cotton yarn occupied 21.7 per cent, soap, oil, candles and other goods occupied 6.1 per cent. Sugar occupied 4.4 per cent and Chemical goods occupied 2.2 per cent.

For the first five months of 1941, Shanghai's imports are listed below according to their importance:

	Value of Imports (000 omitted)	*Percentage*
Foodstuffs	36,025 customs gold units	29.7
Cotton, cotton yarn, etc.	25,923	21.4
Soap, candle, oil, etc.	8,320	6.8
Sugar	5,055	4.2
Books, paper, etc.	4,749	3.9
Metals, etc.	4,136	3.4
Others	37,111	30.6
Total	$121,319	100.0

As to exports, Shanghai exported more mineral ore and metals in May. Cotton piece goods occupied the second and third place while animal products occupied the fifth place. Total export of mineral ore and metals in the month was $29,063,000 or 14.7 per cent of the total exports. Total export of cotton yarn was $28,967,000 or 14.6 per cent. Total export of cotton thread and knitted goods was $25,346,000 or 12.8 per cent. Total export of cotton cloth was $18,692,000 or 9.4 per cent. Total export of animal products was $14,584,000 or 7.5 per cent. For the first five months of 1941, the kinds of exports are listed below according to importance :

	Value of Exports *(000 omitted)*	*Percentage*
Cotton Yarn, etc. ..	$148,529	19.0
Mineral ore, etc.	96,117	12.3
Yarn, knitted goods, etc. ..	85,454	10.9
Animal products	67,969	8.7
Piece goods	64.851	8.3
Miscellaneous goods ..	62,563	8.0
Others..	256,912	32.8
Total	$782.395	100.0

A total of 814,668 tons of ships entered and cleared at the port of Shanghai in May, representing an increase of 118,557 tons when compared with April. Ships entered and cleared Shanghai for other coastal ports totaled 330,781 tons, representing a decrease of 49,303 tons when compared with April. As to the ships entered and cleared at the port of Shanghai in May, Japanese ships held first place, followed by American, British and French ships.

Finance and Industry

In the month of June, Shanghai's exchange market firmed up slightly. On June 28, Shanghai's exchange rates were 3.3125d. in sterling and 5.40625 in U.S. Dollars as against 3.3125d. and 5.375 of May 30. In the first week, the market was very steady and quiet with only small demands for American dollars for short-covering. Most of the speculators kept them on the sidelines as it was difficult to say what might happen to the exchange market with the arrival of Mr. Manuel Fox and Mr. Cyril Rogers, the American and British members of the Currency Stabilization Fund Committee in Hongkong. In the second week of the month, the market was also very quiet. There were small demands for American dollars by sugar importers but the market was steady when the tension between Japan and the Netherlands East Indies eased off.

In the third week, the value of Chinese dollar increased in the local market as President Roosevelt ordered the freezing of German and Italian credits in America. Meanwhile, speculators watched closely the outcome of the third National Financial Conference and the meeting of the Currency Stabilization Fund Committee in Chungking.

The Chinese dollar remained unchanged in the fourth week, despite the outbreak of hostilities between Germany and Russia as the following rumors were circulated in the market : (1) Withdrawal of Japan from the Axis Alliance, (2) Joining by Japan of the American-British front, (3) Change of Japanese Cabinet, and (4) Soviet-Japanese clash.

The following table gives the quotations of Shanghai's exchange market during the month :

June 2	3.296875d.	5.34375
3	3.296875d.	5.34375
4	3.296875d.	5.375
5	3.3125d.	5.375
6	3.3125d.	5.375
7	3.3125d.	5.375
9	3.296875d.	5.34375
10	3.3125d	5.375
11	3.3125d	5.375
12	3.296875d.	5.375
13	3.296875d.	5.375
14	3.3125d.	5.375
16	3.328125d.	5.40625
17	3.34375d.	5.4375
18	3.34375d.	5.46875
19	3.328125d.	5.4375
20	3.328125d.	5.4375
21	3.328125d.	5.4375
23	3.328125d.	5.4375
24	3.3125d.	5.40625
25	3.3125d.	5.40625
26	3.3125d.	5.40625
27	3.296875d.	5.375
28	3.3125d.	5.40625
30	3.296875d.	5.40625

As to the local gold bar market, prices fluctuated according to the rates of the exchange market. The closing price of 10-oz. gold bar on June 30 was $6409 as against $6423 for May 31, or a decrease of $14. Total turnover in the local gold bar market for the month was 65,700 10-oz. fictitious bars. As to actual gold bars, only 347 bars changed hands in the entire month. Quotations of the actual bars were from $280 to $310 higher than the fictitious bars. The following table gives the quotations of fictitious bars in the month :

	Opening	*Maximum*	*Minimum*	*Closing*
June 2	$6440	*$6480*	$6425	$6476
3	6450	6475	6445	6454
4	6540	6450	6426	6436
5	6420	6440	6418	6433
6	6448	6457	6432	6441
7	6435	6450	6435	6449
9	6460	6500	6455	6496
10	6505	6475	6450	6474
11	6465	6477	6453	6472
12	6478	6489	6461	6469
13	6460	6469	6453	6469
14	6440	6443	6410	6416
16	6390	6398	6355	6371
17	6355	6369	6328	6345
18	6340	6355	6325	6331
19	6320	6380	*6310*	6374
20	6375	6385	6357	6378
21	6390	6413	6373	6375
23	6420	6450	6362	6380
24	6370	6392	6363	6373
25	6378	6385	6365	6380
26	6390	6405	6370	6398
27	6402	6428	6393	6421
28	6425	6435	6385	6404
30	6395	6415	6389	6409

The maximum price for the month was $6480 on June 2 and the minimum was $6310 on June 19. The closing price for the month was $6409.

Shanghai's Industrial Condition in April

Despite the serious problem of shortage of supply of raw materials and power as well as the difficulty of exporting manufactured goods because of the general blockade, Shanghai factories prospered in April, according to latest figures available.

All Shanghai's sixty-four cotton mills continued to operate their 2,186,000 spindles and 26,800 looms. Although the number of spindles increased by 5,000 and the number of looms increased by 250, total production of the mills dropped a little in the month.

Of the total of 64 mills, 21 are Chinese mills, operating 616,000 spindles and 4,600 looms, 38 are Japanese mills, operating 1,330,000 spindles and 18,500 looms and five are British mills, operating 240,000 spindles and 3,700 looms.

Total production of cotton yarn in the month was estimated to be around 70,000 bales, representing a decrease of 4,000 bales when compared with March. The following table gives the number of mills, number of spindles, number of looms of the different mills operating in Shanghai in May :

	Number of Mills	*Number of Spindles*	*Number of Looms*
Chinese cotton mills	21	616,608	4,595
Japanese cotton mills	38	1,328,418	18,525
British cotton mills	5	241,000	3,686
Total	64	2,186,026	26,806

The following table gives the total consumption of cotton, total production of yarn and total production of cloth in the different mills in May :

	Consumption of cotton (piculs)	*Total production of yarn (bales)*	*Total production of cloth (pieces)*
Chinese cotton mills	120,771	34,558	231,694
Japanese cotton mills	104,598	30,174	755,276
British cotton mills ..	18,559	5,473	107.735
Total	243,928	70,205	1,094,705

Other industries, such as chemical works, pharmaceutical factories and weaving mills had very good business in the month.

However, the business condition of rubber goods factories, silk filatures, and flour mills was slack because of the growing difficulty of obtaining the necessary raw materials. That business conditions for Shanghai factories was very good in general can be seen from the financial reports of the following factories for the year 1940, which are made available only in the early part of July :

(1) THE NEW ASIATIC CHEMICAL WORKS, LTD.

The New Asiatic Chemical Works, is one of the leading Chinese pharmaceutical factories in Shanghai. With a capital of $10,000, it was established in May, 1926. In March, 1930, the capital of the company was increased to $50,000. In March, 1933, the capital was increased to $250,000. In March, 1936, the capital was increased to $500,000. In March, 1938, the capital was increased to $1,000,000. In May, 1940, the capital of the company was increased to $3,000,000. In the last shareholders' meeting, it was decided that the capital of the company will be increased to $8,000,000. Divided into 400,000 shares, the face value of each share will be $20.

This increase of capital of the New Asiatic Chemical Works, indicate vividly the good business of the pharmaceutical factories in town, especially at the present time. Only small quantities of foreign medicine can be imported because of the expansion of the European war. Furthermore, the imported medicine is expensive, because of the high exchange rates.

The company issued debentures of $500,000 in January and another issue of $500,000 in April of 1940. For the first issue the sum of $263,400 was redeemed and of the second issue the sum of $389,000 was paid back. In October of 1940, the company issued a third loan of $1,000,000 bearing interest of ten per cent. This third issue will be redeemed in June, 1944.

In addition to the manufacture of raw materials (chemicals) used for the manufacturing of medicines, the factory is also manufacturing glassware, cosmetics, serums, and many special medicine.

The following table gives the business condition of the company in the past few years :

	Total Business	*Net Profit*	*Dividend for each share*
1932	$353,306.73	$30,608.33	$3.00
1933	614,205.59	51,279.49	3.00
1934	710,582.97	50,998.81	3.00
1935	825,083.84	57,494.50	3.00
1936	1,009,676.86	191,590.20	3.00
1937	1,303,113.92	108,491.03	3.00
1938	1,717,016.07	162,308.90	3.00
1939	3,968,571.52	211,422.49	3.00
1940	5,161,146.31	459,000.49	3.00

The face value of the shares is $20. In 1938, the market value of the shares was $23. At present, the market quotation was $25.50.

(2) THE CHINA MATCH CO., LTD.

The China Match Company, Ltd. has announced the payment of $4 as dividend for the year of 1940 for every share, according to the Sino-Foreign Financial Weekly.

The company, organized in July, 1932, operated a factory in Chapei but this factory was destroyed during the hostilities of 1937. In 1938, the company built a new factory on Brenan Road in the International Settlement of Shanghai. The business condition of the company is shown in the following table :

	Total Business	*Profit*	*Dividend*
1940	$1,245,106	$48,998	$4.00
1939	780,429	39,486	4.00
1938	212,155	23,211 (loss)	—
1937	—	—	—
1936	415,826	29,226	—
1935	292,000	20,000 (loss)	—
1934	328,933	11,280 (loss)	—
1933	381,541	20,167	1.60
1932	26,204	5,921 (loss)	—

The shares of the company were quoted in the local stock market last December at $28 (face value is $20). The minimum quotation of the stock of the company was $25.50 in August of 1940. In 1941, not a single transaction of the stocks of the company was reported in the local market.

(3) NANYANG BROTHERS TOBACCO COMPANY.

The Nanyang Brothers Tobacco Company paid recently a dividend of $2 to every share for the year 1940, as against $1 for the year 1939 and $0.80 for the year 1938, indicating the good business condition of the company during the past three years.

At present shares of the company are quoted in the local market at $18 (ex-dividend) which is three dollars higher than its face value of $15. In this connection, it must be said that the quotation of the company improved greatly in the past few years. Because of heavy losses sustained by the company during the hostilities in Shanghai in the latter part of 1937, including the loss of its main factory in Yangtszepoo, the quotation of its share in 1938 dropped to $2 and later increased to $5.70. In 1939, it increased to $10 and only in recent months, it increased to $18.

In 1922 and 1923, the company had very good business and total output of cigarettes amounted to over $50,000,000 in a year and net profit was as much as $5,000,000. However, because of domestic political trouble, including civil wars as well as poor management, business was reported to be bad in latter years. Business in 1931 improved again and made a profit of $761,680, in 1932 made a profit of $1,055,149, in 1933 made a profit of $1,359,565, in 1934 made a profit of $1,204,731, in 1935 made a profit of $600,681, in 1936 made a profit of $302,184. The business in the first six months of 1937 was reported to be good but in the second six months as a result of the war, heavy losses were sustained. For the past three years, the annual shareholders' meeting was not held and no detailed account of the business condition of the company was available.

The company was organized in the latter part of the Manchu Dynasty with a capital of $100,000. In 1915, its capital was increased to $1,000,000. It was increased in 1918 to $5,000,000 and in 1919 to $15,000,000. But in 1931 the capital was decreased to $11,250,000, divided into 750,000 shares of $15 each. Before the outbreak of the war, the company operated a factory at Seward Road in Shanghai and a factory in Hankow, another in Hongkong and a third in Java. In addition, the factory operated three tobacco leaf factories in Hsuchow, Liufu and Fangtze, the famous producing centers of tobacco leaf in China. At present, all its factories are closed (machinery of the Hankow factory was reported to have been moved to Chungking) and cigarettes of the factory are being manufactured by small factories of other companies in the International Settlement of Shanghai.

Commodities and Cost of Living

Rice, cotton, cotton yarn and cotton cloth are the most important commodities in Shanghai and details of these commodities for the month of June will be dealt with here.

(1) *The Rice Market :* Total turnover of foreign rice in June around 400,000 bags and 28,000 tons while total turnover of native rice in the month was 5,000 bags. In addition to considerable demands for foreign rice by the local speculators, large quantities of foreign rice were bought in the month by the Ningpo, Swatow, Nanking and other merchants as there was a general shortage of supply of rice in the occupied areas of Central China. The following table gives the total turnover of rice in different business days of the month :

	Total Turnover	
June 2	10,000 bags and	600 tons
3	6,000	600
4	9,300	800
5	15,000	1,000
6	20,000	
7	16,000	1,500
9	17,500	1,000
10	13,000	2,000
11	9,000	2,000
12	13,000	800
13	14,000	900
14	15,000	1,000
16	15,000	
17	18,000	1,800
18	25,000	1,800
19	20,000	2,000
20	15,000	1,000
21	30,000	2,000
23	25,000	2,000

	Total Turnover	
June 24	17,000 bags and	1,200 tons
25	15,000	800
26	18,000	1,000
27	18,000	1,500
28	8,000	600
30	20,000	900
	401,800	28,800

Prices of rice dropped considerably in the latter part of May when the Shanghai Municipal Council took definite action to import rice from Hongkong and sell it to the general public at the fixed price of $110 per 78 kilo zah. However, in the latter part of June, prices of rice increased because of large demands for foreign rice by the merchants from the occupied areas. Speculators remained active in the month as numerous rumors of growing tension in the South Pacific were fabricated in order to push up the prices of rice. The following table gives the prices of rice in the month :

	June 5	*June 12*	*June 19*	*June 26*	*June 30*
First grade Saigon	$119.00	$118.00	$126.00	$128.00	$129.50
Second grade Saigon	114.00	112.00	118.00	121.00	125.00
Mixed/broken rice	90.50	—	—	—	—
Wusih	135.00	125.00	130.00	137.00	136.00
Quinshan	132.00	122.50	129.00	—	131.00
Sungkiang	133.00	—	—	—	—
Nankong	136.00	133.50	135.00	137.50	136.00
Chinkoo	—	—	135.00	140.00	136.00
Changchow	—	—	—	—	—
Tanyang	—	116.00	—	—	—

(2) *The Cotton Market :* During the month the Shanghai cotton market had a total business of 193,786 piculs of raw cotton. Of the total, 107,300 piculs were purchased by cotton merchants and 86,486 piculs by cotton mills. In May, it may be recalled, total turnover of cotton was 100,131 piculs, of which 30,615 piculs were bought by cotton mills and 69,516 piculs by cotton merchants. In April, total turnover of cotton in the local market was 173,266 piculs, of which 48,600 piculs were bought by cotton mills and 12,966 piculs by cotton merchants.

	June	*May*
Cotton mills	86,486	30,615
Cotton merchants	107,300	69,516
Total	193,786	100,131

On June 30, Shanghai had in stocks about 410,000 piculs of raw cotton as against 427,000 piculs by the end of May. As to prices of raw cotton, they increased much during the latter part of the month as shown in the following table :

	June 30	*May 31*
U.S. Middling	$495.00	$425.00
Brazilian	470.00	413.00
American Punjab	352.00	—
Bangoon	232.00	—
Hooche	212.00	192.00
Western	390.00	—
Broach	290.00	—
Bengal	—	196.00

(3) *The Cotton Yarn Market :* Shanghai has at present three cotton yarn exchanges. One is the old cotton goods exchange, which is to be discussed here. The second is the newly organized Cotton Yarn Exchange and the third is the Japanese cotton goods exchange. In the old cotton goods exchange, total turnover for the month of June was 183,385 bales of cotton yarn, of which 165,325 bales were bought by local speculators and 17,905 bales by the Hongkong merchants, and about 155 bales by other outport merchants. From these figures, one can see that the local yarn market is completely dominated by the speculators. Conditions of the other two exchanges will be discussed in a later report.

The following table gives the total turnover of cotton yarn in the month under review :

	Local Speculators	*Hongkong Merchants*	*Other Merchants*	*Total*
First week	37,145	2,720	115	39,980
Second week	44,345	6,005	20	50,370
Third week	45,675	4,970	20	50,665
Fourth week	38,160	4,210	—	42,370
Total	165,325	17,905	155	183,385

Prices of cotton yarn increased much in the latter part of the month as the speculators believed that as war broke out between Soviet Russia and Germany in Europe, the much-talked about war between Japan and the United States in South Pacific would at least be postponed. The increasing difficulty to import foreign cotton constituted another reason for the increase of the prices of yarn in the local market. The following table gives the prices of cotton yarn in the week :

	June 28	*May 31*
10's Boy Scout	$1,020	$1,005
10's Double Horse	1,036	1,055
10's Shepherd	880	—
20's Double Horse	1,594	1,445
20's Heavenly Girl	1,380	1,315
20's Special Kincheng	1,535	1,390
20's Double Globe	1,340	1,272
20's Shepherd	1,480	1,375
20's Wu Fu	1,383	1,267
32's Heavenly Girl	2,015	—
32's Shepherd	2,010	—
32's Pine Deer	2,080	—
32's Flying Tiger	2,035	—
32's Wu Fu	2,010	—
32's Double Carp	—	1,990

On June 30, Shanghai had in stock 284,000 bales of cotton yarn, of which 179,000 bales were Chinese and British products while the remaining 105,000 bales were Japanese products.

(4) *The Cotton Cloth Market :* In the local cotton cloth market, total turnover for the month of June was 14,885 bales, of which the local dealers took 7,250 bales, the Chekiang-Kiangsu merchants took 615 bales, the Kwangtung-Hongkong merchants 3,250 bales, the South Sea merchants 2,850 bales and the Tsingtao-Chefoo merchants 920 bales as shown in the following table :

	First week	*Second week*	*Third week*	*Fourth week*
Local dealers	2,100	1,500	1,450	2,200
Chekiang-Kiangsu	160	170	145	160
Kwangtung-Hongkong	900	600	750	1,000
South Seas	400	300	1,000	1,150
Chefoo-Tsingtao	200	300	100	300
Total	3,760	2,870	3,445	4,810

The following table shows the price increases during the month :

	June 28	*May 31*
16 lb. Butterfly	$51.50	$48.75
16 lb. Double Elephant	51.50	47.50
16 lb. Globe	48.50	46.50
16 lb. Fei Hung	48.50	45.00
12 lb. Ta Pung	44.50	42.75
12 lb. Fu Kwei	44.50	42.25
12 lb. Chen Chung	41.50	38.50
12 lb. Dragon Head	48.25	46.30
12 lb. Ball	47.35	43.50
12 lb. Flying Fish	47.55	43.60
12 lb. Wu Fu	46.50	—

Living Costs Shrink Slightly

For the first time since last August, the cost of living of the Chinese working class in Shanghai dropped a little in the month of June, according to statistics compiled by the Industrial Section of the Shanghai Municipal Council. This was due mainly to the drop of the prices of rice, following the import and sale of rice by the Shanghai Municipal Council at a fixed price of $110 per bag of 78 kilo.

It is interesting to note that according to the investigation of the S.M.C. an average Chinese family of 4.62 persons requires now a total income of $161.53 for general living expenses and an income of $149.83 is needed for just bare subsistence. The following table gives the cost of living index for the month of June as compared with the previous months :

(1936=100)

	1940		*1941*	
	May	*June*	*May*	*June*
Foodstuffs	$383.24	$451.74	$923.18	$873.99
House rent	304.83	304.83	385.26	385.26
Clothing	403.85	360.00	556.03	555.64
Fuel and light	464.21	452.20	757.85	760.71
Miscellaneous	393.89	394.55	747.18	751.31
General Index	382.91	422.91	802.68	772.82
Purchasing power of Chinese dollar	26.12	23.65	12.46	12.94